Action Research Programme
Research Report
June 3, 2016

"The research we do at the local level - collaboratively - is what makes formal, outside research work. Outside research cannot be installed like a car part - it has to be fitted, adjusted, and refined for the school contexts we worked in."

— Mike Schmoker

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How Harkness changed my Assessment Practises:
A collaborative and inquiry-based environment results in more
diagnostic and formative criterion-referenced sssessments
Ira Alexandra – Southridge School

INTRODUCTION:
Despite the Harkness philosophy's existence since 1930, only recently has it surfaced in conversations on education amongst ISABC schools. Referring to a collaborative, discussion-based learning approach, the philosophy was introduced to Phillips Exeter Academy in New Hampshire by philanthropist Edward Harkness in 1930. Since employing Harkness teaching methodologies in my classrooms as of 2012, I have questioned the need to change the nature of my assessments.

Tensions within my own educational pedagogy began after my first year teaching at Southridge where I felt my method of instruction, moulded by the Harkness philosophy, conflicted with my summative assessment practises. Specifically, the social studies department weighed 50-70% of a student's knowledge on summative assessments using multiple choice tests - a process typically reserved for testing retention of factual over higher-order thinking knowledge.

The B.C. curriculum is moving away from "knowing" things to "understanding" things.[1] With a changed focus on learning, should the nature of grading and assessment likewise be revolutionized? The provincial government is currently devising a provincial assessment program that is based on competencies, standards, and understandings rather than content mastery.[2] Likewise, my Harkness classroom focussed on a deep understanding of material looking at several angles of a specific historical event rather than breadth or mastery of facts. Given that I was limited to 6 months of research, as well as the fact that our department accepted the long answer response format to be the most appropriate summative assessment method to "express group-style complexity alone,"[3] I chose to focus on how Harkness changed my assessment practices?

Over the past 6 months I focussed on measuring the changes in my assessment practices including collecting daily formative and diagnostic assessment, allowing time for student reflection, and the effects these assessments had on my students' learning.

REFERENCE TO LITERATURE & THEORETICAL FRAMEWORK:
My research connects to educational research on types of formative, diagnostic, and summative assessment, the problems with current assessment models and how assessment must be modified to reflect the 21st century learner.

B.C. Ministry Document. *Enabling Innovations: Transforming Curriculum and Content*. 2012.

The B.C. Ministry document provides practical solutions on building assessments with a stress on creating formative assessments and allowing for self-assessment. The document highlights the use of fair assessments that address the needs of all types of learners and encourages the notion of including triangulation of data (written, oral, performance) in order to provide reliable information on student learning.

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[1] *The Advisory Group on Provincial Assessment "Final Report"* (Vancouver: SFU, 2014).

[2] Ibid.

[3] P. Kooistra, "Harkness Learning: A Quick Overview,"Handout, 2016.

Cooper, Damian. *Redefining Fair: How to Plan, Assess and Grade for Excellence in Mixed Ability Classrooms*. Bloomington, IN: Solution Tree, 2011.

Cooper, Damian. *Talk about Assessment: Eight Big Ideas to Improve Learning for all Students,*" Feb 6, 2015. Southridge School, Surrey. Power Point: http://webcache.googleusercontent.com/search?q=cache:tfBfuRK5XUAJ:bu.deltasd.bc.ca/ sites/default/files/redefining_fair--damian_cooper.ppt+&cd=1&hl=en&ct=clnk&gl=ca.

Cooper, Damian. *Talk about Assessment: High School Strategies and Tools*. Scarborough, ON: Nelson Education, 2010.

Damian Cooper is an independent education consultant who specializes in helping teachers and administrators connect curriculum, instruction, and assessment in ways that improve learning for all students. Much of his literature and lively presentations involve helping schools and school districts improve their instructional and assessment skills. In both his articles *Redefining Fair*, and *Talk about Assessment*, Cooper addresses changing grading and reporting systems from a norm-referenced to a criterion-referenced model. He warns against including late marks and other disciplinary measures in assessment reports because it is an inaccurate reflection of the student's knowledge. He recommends replacing percentage grades with levels of achievement; in particular, he wants single subject grades to be replaced by grades for each of the essential learning standards. He discourages passing grades of 50% because it sends the message to students and parents that mediocrity is acceptable and that 50% of the information is unnecessary to learn. Finally, Cooper ends *Redefining Fair* by stating that fairness requires "equity of opportunity" as opposed to standardizing testing.

Drake, Susan. *Interweaving Curriculum and Classroom Assessment.* Don Mills: Oxford University Press, 2014.

Susan Drake is a professor in the Graduate and Undergraduate Department of Brock University in St. Catherine's, Ontario. She earned her PhD in curriculum from the University of Toronto. Drake co-authored the book *Interweaving Curriculum and Classroom Assessment*; a book which looks at inquiry-based learning, backwards by design, and several other curriculum designing techniques with the goal to support students in their learning.

Hassan, Thomas E. *A Classroom Revolution: Reflections on Harkness Learning and Teaching.* Exeter: Trustees of Phillips Exeter Academy, 2015.

Thomas Hassan is the fourteenth principal of Phillips Exeter Academy in New Hampshire, Massachusetts. Hassan received a B.A. degree from Brown University and M.Ed. and Ed.D. degrees from the Harvard Graduate School of Education. The Academy is the birthplace of the Harkness philosophy, introduced by philanthropist Edward Harkness in 1930. *A Classroom Revolution* provides anecdotes on teachers' experiences with implementing the Harkness pedagogy. The book outlines the philosophy and provides details of the skills developed through the Harkness classroom.

Khan, Salman. *The One World Schoolhouse.* New York: Hachette Book Group, 2012.

Salman Khan is an American educator and founder of the Khan Academy. The Academy is a free online education platform with over 6000 videos, predominantly providing lessons in the sciences and maths. In his novel *The One World Schoolhouse*, Khan provides several arguments against summative assessments including the dangers of labelling students based on their results from testing; which he argues tells us little about a student's quality of reasoning. Similar to Cooper, Khan also believes that 50% is unacceptable as a passing grade, because it implies that mediocrity is acceptable.

Magnussen, Kris, and Blye Frank. *The Advisory Group on Provincial Assessment: Final Report.* Vancouver: SFU/UBC, 2014.

The advisory group provides informed guidance and advice to support and improve public education in British Columbia. The document outlines suggestions to focus assessment on big ideas as opposed to content: "understanding" as opposed to "knowing."

McTighe, Jay., & O'Connor, K. *Seven practices for Effective Learning: Educational Leadership.* http://www.ascd.org/publications/educational-leadership/nov05/vol63/num03/Seven-Practices-for-Effective-Learning.aspx, published 2006.

McTighe, Jay., & Grant Wiggins. *Understanding by Design.* Association for Supervision and Curriculum Development, 1998.

Jay Mc Tighe is an experienced educator and noted author who provides consulting services to schools and school districts in the United States. He served as director of the Maryland Assessment Consortium, a state collaboration of school districts working together to develop and share formative performance assessments. As well, he served as a member of the National Assessment Forum, a coalition of education and civil rights organizations advocating reforms in national, state, and local assessment policies and practices. Mc Tighe's core message revolves around developing the curriculum around big ideas and core competencies. He also promotes 'backwards designing.'

Roediger, Henry L., Mark A. McDaniel, and Peter C. Brown. *Make it Stick: The Science of Successful Learning.* Harvard University Press, 2014.

Henry Roediger and Mark McDaniel are cognitive scientists focussed on the study of learning and memory; whereas, Peter Brown narrates their findings. The book focusses on encoding learning and effectively retrieving material to improve test results. Self-testing, asking questions rather than taking notes or re-reading the text, and purposely increasing the difficulty of learning helps make information "stick" in the brain. The authors' message reinforced the importance of formative assessment and confirmed my use of daily google forms to provide diagnostic feedback to the students on their understanding of the content as well as encouraging reflecting on one's learning to solidify knowledge.

CONTEXT:
I currently teach Socials Studies 9-11 at Southridge School, located in the growing community of South Surrey. The school consists of students from kindergarten to grade 12 and is highly involved in its surrounding community through several service initiatives. Most students are involved within our school community and in the surrounding South Surrey community. In the past I also taught Social Studies 8 and English 8 and 9. My involvement in two departments provides insights that allow for greater collaboration in assessments and scope and sequence.

Southridge Secondary School is focussed on assessment across all departments as part of our Professional Development; along with maintaining and nurturing our collaborative, discussion-based approach as expressed through the Harkness philosophy. To better understand the commitment the school made towards implementing the Harkness philosophy in our senior school, Southridge recently created a 'Harkness Coach' position and developed three levels of Harkness proficiency that teachers can strive to obtain through professional development.

In the social studies department, as well as in other departments, the students learn in a collaborative environment where lectures (sometimes completed through video lectures) and readings are completed at home (flip classroom), so that class time is spent in dialogue, understanding and analyzing the material together. The class typically ends in reflection of the conversation through writing or having one-on-one time with the teacher. Most of our departments foster in-class work where the teacher and peers are available to assist with written and project work, as opposed to completing work at home where there is the potential for outside assistance.

METHODOLOGY:

The nature of my action research project focussed on the impact the Harkness philosophy has on student learning. As a result, the majority of my data collection involved interviews and surveys with students. I compared my findings with observations collected from other social studies teachers at Southridge and at Saint George's. Finally I conducted a survey with teachers at Southridge in the math, science, English and social studies department in regards to formative assessment.

Understanding that I was restricted to collect research over a 6 month period, I modified my research question to include only formative and diagnostic assessment. In order to properly analyze the effects of the Harkness philosophy on the learner in regards to summative assessment, ideally my research would take place over 3-5 years analyzing student performance on a standardized test.

I focused my research on my Social Studies 9-11 classes, which in total comprised of 77 students. I used the following data collection strategies: field notes, interviews, videos, student work in the form of reflective journals, quantitative measurements and surveys.

Specifically, my field notes consisted of daily google form results and three end of term interviews held with each of my 77 students. I videotaped three interviews with students, one male and one female in grade 11, and one male in grade 10. The videos asked questions about how a discussion-based classroom has improved or hindered their learning, and what types of assessment do they find best reflects their ability to convey their knowledge. (Figure 1, Appendices) A fourth video with a female grade 10 student demonstrates going over formative assessment with a student in order to reflect on her contributions and learning over the term. (Figure 2, Appendices) I conducted several interviews with teachers as well in regards to assessment, including four social studies teachers and one administrator.

My most effective form of data collection was through surveys because they allow for a large amount of information to be collected in a short amount of time. As well, the surveys were anonymous encouraging honest reflections by students. I conducted a total of three surveys: two for students and one for teachers. In regards to my student surveys, 44% responded to my survey on assessment methods (both formative and summative) in the Harkness classroom, and 55% responded to my survey on tracking discussions and google forms as an effective method of formative and diagnostic assessment. I had greater involvement in my teacher survey where 71% responded on tracking and other methods of formative assessment. I only surveyed teachers who were committed to using the Harkness philosophy in their classroom and, as a result, had obtained their level 2 or 3 in Harkness training.

PROCESS:

"Assessment and instruction are inseparable because effective assessment informs learning."[4]

Since the start of my project, several aspects have changed in regards to summative assessment in our department, which I will outline below; however, I focussed my 6 months of research on measuring how my assessment practises changed to include daily formative and diagnostic assessment, and the implications this had on my students' learning.

In regards to summative assessment, several positive changes occurred in our department. Inspired by a presentation in February, 2015 by Damion Cooper, the majority of teachers in our department adopted a common rubric that was criterion-referenced and consisted of four levels of achievement. (Figure 4, Appendices) Summative assessments tasks are now designed prior to developing the unit based on

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[4] Damian Cooper, *Talk about Assessment: Eight Big Ideas to Improve Learning for all Students*," Power Point, http://webcache.googleusercontent.com/search?q=cache:tfBfuRK5XUAJ:bu.deltasd.bc.ca/sites/default/files/redefining_fair--damian_cooper.ppt+&cd=1&hl=en&ct=clnk&gl=ca, Slide 10.

enduring understandings which match curriculum targets with assessment tasks.[5]   Finally, summative assessments must include triangulation of data in order to provide a valid and reliable picture of student achievement through performance tasks, written test data, and oral defense/conferencing.[6]

For the past 6 months I focussed my research on how a discussion-based learning environment naturally creates daily formative and diagnostic assessments, resulting in positive implications on my students' learning. Prior to my training in the Harkness philosophy, I taught a combination of a seminar and lecture style classes. I would begin each unit determining previous knowledge through calling upon students who volunteered to speak. In reflection, I did not know the base knowledge of the quieter students, and would only learn of their level of understanding through homework checks (which is work a tutor may have completed) and summative assessments. Today, I daily implement a diagnostic assessment task to determine my students' level of understanding prior to teaching,[7] and provide them with instant feedback, through the use of google forms. These daily forms emphasize "for" learning and provide my class with "relevant, and timely feedback."[8] The forms can increase student level of engagement in the conversation that follows because they have a clearer understanding of the content. Students react positively to the daily forms noting how the forms reinforce essential learning: "I like the daily Google forms and other formative assessments that help solidify this information into long-term memory" (Grade 9 student). "I find that formative assignments are often taken just as seriously as summative assessments, but since the pressure is off they end up being more effective and more is learned through them. For example, people aren't just trying to 'get the marks' but rather understand the material" (Grade 11 student). Not only do the forms demonstrate a student's understanding of the material, but also the quality of the class discussion is another type of daily formative assessment.

Harkness discussions reinforce the following cross-curricular competencies outlined in the B.C. Ministry Document: *Enabling Innovations:* "communication, creative thinking, critical thinking ... [and] personal responsibility."[9] Students are provided with formative feedback when they share their understanding of the text. Through dialogue, they test the validity of their statements with their peers, acquire feedback immediately, and adjust their previous beliefs based on other's input. This process continues for the extent of the class where students move seamlessly through the roles of teacher and student; co-engineers in the processing and organizing of knowledge. Two students articulated their experiences as follows: "I got to know various opinions on a single matter and that really broadened my views" (Grade 11 student). "Sometimes the discussions are really good and I really gain a lot from it. It helps me to organize the material that I had read outside of class and contextualize everything" (Grade 11 student). In essence, students enjoyed learning from their peers, challenging and advocating for their own perspective, and gaining confidence in their ability to express their analysis. However, not all students are confident in expressing their views out loud, prompting the need for me to create a written method that enabled shy students or those who process information slower, to share their ideas with the class.

Reflection is considered assessment 'as' learning, where it is "a metacognitive process in which students take ownership for improving their own learning. It involves students setting learning goals as well as monitoring, reflecting upon and adjusting their own learning, often in response to feedback from their teacher and their peers."[10] In *Make it Stick,* Brown, Roediger, and McDaniel refer to reflection as a form

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[5] Grant Wiggins and Jay McTighe, *Understanding by Design,* Association for Supervision and Curriculum Development, 1998.

[6] Cooper, Slide 25.

[7] Ibid, slide 19.

[8] B.C. Ministry Documents, *Enabling Innovations: Transforming Curriculum and Content,* 2012, 7.

[9] Ibid, 8.

[10] Earl, L. *Assessment as Learning: Using Classroom Assessment to Maximize Student Learning,* (Thousand Oaks: Corwin, 2003) page unknown.

of retrieval process that interrupts the process of forgetting. The authors define reflection as paraphrasing the key ideas, providing examples of ideas, and relating the new information to what one already knows.[11] At the end of class, students are encouraged to participate in a written reflection. This method also reinforces Cooper's notion that "assessment must be balanced including oral…as well as written tasks."[12]

I similarly encourage reflection of one's learning throughout the term through hosting one-on-one interviews with all 77 of my students. The interviews allow the student to express his/her learning and hear my own thoughts on his/her preparations and contributions to class discussions. Together we make goals for him/her to accomplish during the following term. (Figure 3, Appendices)

Another method I use for collecting daily formative assessment is tracking the conversation. (Figure 5, Appendices) This is an issue of contention between students and teachers alike because I believe the purpose of tracking is misunderstood and needs to be clarified in the first week of school. I use tracking to teach skills that are required to foster a productive discussion including making text references, and discouraging interruptions. Tracking also allows me to see over a period of time students who continually dominate a conversation and those who remain silent. What I have noticed is that my classes as a whole have improved sharing the conversation since there is an understanding that neither dominating nor remaining quiet are acceptable in our class discussions. I conducted both a teacher and student survey on this issue and what I found was that the younger grades who had been exposed to Harkness learning since they entered high school were more accepting of this technique: 67% enjoyed having the conversation tracked and understood its purpose in grade 9, as opposed to only 33% in grade 11. One grade 11 student explained that a "discussion-based classroom environment should be able to be spontaneous and fruitful, without having to be systematically and mathematically recorded or tracked" (Grade 11 student). Amongst the teachers I surveyed, 86% track discussions. Arguments made against tracking include that tracking rates "how many times a person speaks" (anonymous teacher) as opposed to the quality of the statement. Again, this comes from misuse of the tracking sheets and is an area I would spend time on educating my colleagues and students.

LEARNING STATEMENTS & FINDINGS:
"Meaningful teacher inquiry should not depart from the daily work of classroom teachers but become a part of their daily work."[13]

In my recent past, data collection aside from summative assessments, rarely was a part of my daily work. Upon embarking on this project, data informs my lesson planning and methods I employ for assessment. As a result of my action research project, I teach "more responsively;"[14] I am willing to try new methods based on student feedback achieved through surveys and one-on-one interviews. Learning how to use technology, like google forms, enables me to collect, organize, and find patterns using metadata.

To summarize, what I discovered is that teaching in a discussion-based environment allows for daily formative assessment through the tracking of student discussions and what is actually said by students, as well as through the reflections post discussion. It allows for diagnostic feedback on a daily basis

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[11] Henry L. Roediger, Mark A. McDaniel, and Peter C. Brown, *Make it Stick: The Science of Successful Learning,* (Harvard University Press, 2014) audio book.

[12] Cooper, Slide 9.

[13] *The Reflective Educator's Guide to Classroom Research 3rd Ed.* (U.S.A.: Corwin/Sage Publication Ltd, 2014) 85.

[14] Stephen Brookfield, *Becoming a Critically Reflective Teacher,* (San-Francisco: Jossey-Bass, 1995.) 35.

through google forms which are taken up and each student is provided immediate feedback on their understanding of the content. Finally through an end of term interview, students obtain feedback in looking at their overall term performance, can share struggles and create goals for the following term, plus it allows them an opportunity to reflect. To quote a grade 11 student: "I think that having a meeting ... is an awesome way to talk about how I think I've been doing this term, and a great way to convey … how I feel about my discussion mark. I haven't had this in my courses in the past, and now that I do I can definitely see the value that it holds" (Grade 11 student).

Have these changes in increased formative and diagnostic assessment had a positive impact on the learner? If 'positive' is defined as improved understanding of the material, engaged and reflective learning, and better organization, then the answer is undoubtedly, yes.

CONCLUSION:
"Good research analysis raises more questions than it answers."[15]

Participating in this action research project gave me the permission to use a number of assessment methods freely under the guise of experimentation. Scholarly research provided an advanced vocabulary and understanding around assessment for both my teaching practise and the broader political processes in the education community. I have increased my conversations with students, teachers and administrators around assessment and learning and have used surveys as an effective method to collect data from these three groups, whereupon I can reflect upon my teaching practise. With my increased understanding of google forms and their effectiveness, I have employed data collection as a part of my daily teaching routine.

I have always seen my students as partners in our journey towards knowledge; however, I feel I empowered my students even more by encouraging their suggestions on new methods of formative assessment which I then employed. Just by opening up dialogue on the process of assessment and making all data and findings transparent makes my students co-creators in their learning; which is an essential element of both the Harkness philosophy and the new B.C. Curriculum guidelines on assessment.[16]

Areas to improve in my future research include involving the parent body in my research, and extending my research into other departments beyond social studies. As well, one obstacle I encountered is the sustainability of my new practise. Creating daily google forms and going over daily reflections takes time during class and has increased my own work load. As well individual conferencing is extremely valuable, yet it requires approximately 5-10 minutes per students. Again, finding time is a concern. Over the next five years I will embark on a new research project where I measure how the Harkness classroom results in improved student performance on summative assessments through observing results on objective performance indicators such as the Socials 11 exams, final unit tests, and improved research essays.

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[15] R. S. Hubbard & B. M. Power, *Living the questions: A guide for teacher-researchers,* (Portland, Maine: Stenhouse, 1997) 117.

[16] B.C. Ministry of Education. *Redesigning Assessment, https://curriculum.gov.bc.ca/redesigning-assessment*, accessed Febrary, 2016.

SUMMARY REPORT
Designing, Testing and Implementing Student-Directed,
Cross-Curricular Non-Competitive Inquiry-Based Learning
Alexandra Lesk – West Point Grey Academy
Chris Stroud – West Point Grey Academy
Jason Camp – York House School
Karen Webb – York House School

REFERENCE TO LITERATURE:
Our **literature review** highlights the purpose of group work and the benefits of project-based work, finally tying them both together under the umbrella of cross-curricular, inquiry-based learning. The published research (Phelps and Damon, 1989; Webb, 1991; Qin and Johnson, 1984) shows that pairing students enables them to interact and communicate, which in turn leads to a deeper understanding of topics that require multiple levels of reasoning, as well as student discussion resulting in a greater number of strategies being suggested. In addition, peer collaboration helps students build a shared representation of the mathematical problem-based learning which increases the students' own beliefs about the adaptable nature of mathematics and the need for reasoned thought (Boaler, 1998; Cobb et al. 1991). We brought these two evidenced-based approaches together and combined them with research on the benefits of inquiry-based learning (Savery, 2006; Simons, 2006) and the opportunity for students to choose their topics in a cross-curricular context to demonstrate that this type of work engages and empowers learners to conduct research, integrate theory and practice, and apply their developing knowledge and skills.

INFORMATION GATHERING:
Our **questions evolved** from "How can we create truly engaging, student-directed deep learning? How does working in groups and preparing for sharing deepen learning? How does student-centred, inquiry-based, non-competitive learning encourage students to maximise their academic potential and enjoy the process of being an active learner?" to "How do we change our school structure and ethos to embrace this type of learning?" Student engagement is rarely a problem for us at WPGA and so the answer to the former query was a given. We **hypothesised** that the ultimate goal of sharing the projects with peers from another school rather than just our parents and classmates would help those last few students engage more deeply than normal. Our biggest problem turned out to be how to manage implementing this project within a conventional, piecemeal timetable and staffing structure, pending government exams, and our traditional math assessment protocol. What we realised fairly early on in the project is that we needed to change our whole school's culture and ethos in order to modernise teaching and learning.

PLANNING:
To **test** our questions, we designed a math/social studies cross-curricular project that featured these opportunities based on one of the "Big Ideas" from the Math 7 curriculum that asked "How can we apply mathematics to inquiry questions and use it to communicate information and data?" Then we asked the students to customize their own essential inquiry question that addressed, "How do we compare and contrast ancient cultures using math?"

EVALUATING:

The project was first **launched** at the end of September 2015, after students participated in an archaeological workshop at the Museum of Vancouver wherein all the ancient cultures featured in the Social Studies 7 curriculum were introduced. Students worked on the project sporadically over the course of the year, and finally presented them to their peers from York House School in May 2016. A few days later, they **completed** a student self-reflection and a feedback survey about the project itself. We have documented these projects through photography, student videos and slideshows, and Google documents. Ultimately, student **assessment** was based on the validity of their essential question; their ability to articulate their discoveries and apply relevant mathematical concepts and skills to answer their inquiry question; the depth and accuracy of the social studies component; and, the quality of their reflection and feedback.

CONCLUSION:

Student feedback revealed the most profound **conclusions** and answers to our questions: given the freedom to pursue their own interests, most students adored the collaborative, project-based learning experience and appreciated the opportunity to work truly cross-curricularly between Humanities and STEM. By recognising the limitations and logistics of trying to instigate and run such a cross-curricular project in a large school with a traditional timetable, our administration has agreed to make changes to accommodate this new style of learning for the next academic year. We also look forward to integrating this project with ISABC Leadership Program participant Alex Ross's global experience projects whereby his students will complete similar cross-curricular work while they are on the field trips he is developing. There is a great deal of overlap between the ethos of the material he is planning to have the students do while abroad, and this also provides a parallel assignment for all those students who cannot or do not want to participate in the student-cultural international exchanges he is planning. Overall, this has been an eye-opening, challenging growth experience for everyone involved in improving the face of education in our school.

We cannot change what we are not aware of, and once we are aware, we cannot help but change.
- Sheryl Sandberg, Lean In: Women, Work, and the Will to Lead

INTRODUCTION:

The Independent Schools Association of B.C. (ISABC) is an exemplary organization of united independent schools committed to common values including collaboration, innovation and educational excellence. Furthermore ISABC itself is dedicated to supporting institutional excellence and being 'a leading voice in education'.

The importance of women in the leadership of strong organizations has been recognized and studied across a diverse range of industries from the military, to medicine, to education. Military teams showed less collective intelligence when they had lower numbers of women (Haring, 2013). Catalyst, an international non-profit organization dedicated to inclusion, found that companies with more women in management and on corporate boards outperformed companies with few women in leadership (Carter, & Wagner, 2011).

Strong organizations in education have an even greater responsibility; diverse leadership sets the expectations for male and female students, faculty and families. As Sheryl Sandberg noted, "Most leadership positions are held by men, so women don't expect to achieve them, and that becomes one of the reasons they don't" (Sandberg, 2013). As a leader and educator of young men and women, I believe that role models are important.

As I became increasingly involved in leadership and the ISABC, I became curious about the proportion of female leaders in ISABC schools. As I attended many Middle and Senior School Principal meetings I noticed there were always more men present. From this experience came my research question: Why are there fewer women than men in independent school leadership? Interestingly there is very little baseline data about the proportion of women in independent school leadership, in B.C. or across Canada. The same dearth of female leadership data has been found in the U.S. where there is an "…absence of reliable and comparable data" (Grogan & Shakeshaft, 2011, p. 27).

My first goal was to examine the current realities of female representation in leadership positions across ISABC schools. Accordingly a simple staffing survey was sent to all ISABC member schools. To enrich these findings, I wanted to explore the experiences of current or past female leaders. A small sample of women were interviewed to ascertain the supports and barriers to their leadership. My second goal was to make recommendations to ISABC to support women in leadership.

Ultimately I hope the process of investigating women and leadership, and the insights achieved, will impact the gender balance in ISABC leadership and allow for even stronger schools.

LITERATURE:

Women have attained unprecedented numbers of middle management positions across many industries including finance, health and education (Gupton, 2009). Although women are cracking middle management positions, they can get trapped there without opportunity for advancement. Women in middle leadership, particularly in education "bear heavy teaching loads and service responsibilities" (Huang, 2008, p. 3). Proposed reasons for getting stuck range from women being "unable to say no" (Huang, 2008, p. 3), to the modesty expected of accomplished women (Eagly, 2007) to the "issue of work and family... a woman's balancing act" (Gupton, 2009, p. 16). Professional women are characterized as not being "as committed as men to career advancement" (Gupton, 2009, p. 16) when they want to, or need to care for their families.

Educational research over the past twenty years shows that substantial barriers still exist for women attaining higher leadership positions. As Gupton (2008, p. 5) observed, "The disparity between who's leading the schools and who's teaching the students is rather ironic since most teachers are women". Historically and currently women "are still lagging far behind in their proportionate representation in administration in education" (Gupton, 2009, p. 3). This is found across university faculties (Huang, 2008) in public education (Statistics Canada, 2008) and in independent education.

CONTEXT:

I have been fortunate to have a rich career in the independent school system, from teaching high school science to the Assistant Head of Aspengrove School. I have been mentored by fine male and female leaders; particularly at my own school where the majority of leadership positions are held by women. However as I have assumed greater leadership roles, and have met educators from other independent schools, I noticed that there are a disproportionate number of male leaders.

While most educators are female, it appeared as though they occupied a minority of leadership roles, particularly in senior leadership positions. Having been impressed by many outstanding female colleagues from different schools, I became curious about why there were so few in formal leadership roles. As I began conversations with some of these women, I wondered how I could find out more about their needs and ultimately make a difference in the ISABC.

PROCESS:

In many ways I feel that this was a personal journey of inquiry rather than teacher-based inquiry. My journey began with my science brain, based on observations in ISABC Leadership meetings of Senior and Middle School Principals. I always note 'who is here', 'what are their traits?' This process led to increasing curiosity and questions. 'Where are the women?' 'Is this different in the Junior School Principals meetings?' 'Are there less women in leadership in the independent system?' and finally 'how would I know?' Eventually these thoughts were distilled into my research questions.

In coordination with Elizabeth Moore, the staffing survey was sent to all ISABC schools. The scientist in me became quite frustrated. People are busy; they do not necessarily have the time to respond to inane research surveys at the whim of one of their colleagues. Or, assuming they are more like me, they have the best of intentions, that survey is half answered, and it ends up partially completed in the ever-growing draft folder. Regardless, humans are not as responsive as the cultured cells, bacteria and students I'm used to conducting research on. I learned a lot about polite reminders and the importance of networks in getting enough data.

METHODOLOGY:

To investigate women and leadership in ISABC schools a mixed-methods approach was used, gathering both qualitative and quantitative data. Firstly a basic staffing survey collecting numbers of female and male faculty and leaders was sent to all 21 ISABC schools. Leadership data was further delineated into two areas, the Senior Leadership Team and Middle Leadership Team. The Senior Leadership Team was defined as Deputy or Assistant Head(s) and Principals, whereas the Middle Leadership Team included Vice-Principals, and Curriculum coordinators such as Primary Years Programme or Diploma coordinators.

Although respondents were assured that no name or identifying information would be associated with data from an individual school, at the time of this report only thirteen schools had responded. To respect the identity of any school, the gender breakdown of teaching faculty, Senior and Middle leaders was evaluated in two ways; all ISABC respondent schools together and then co-ed schools combined.

Qualitative data was obtained through interviews of several female current and former leaders of ISABC schools. Interview participants were chosen informally through a network of acquaintances throughout ISABC schools; they included current and former Heads of School, Senior and Middle leadership team members. Participants were asked five questions:

1. What role has gender played in your leadership experience?
2. What supports (mentors/structures/experiences) have helped your leadership?
3. What barriers have you experienced?
4. What do you feel you need to progress further in leadership?
5. What recommendations do you have to support female leadership in ISABC schools?

Responses were then collated and examined for themes.

EVALUATION/LEARNING STATEMENTS AND FINDINGS:

My original conception of this research project was ambitious. We all juggle the tyranny of the urgency, and trying to create and conduct a comprehensive survey of twenty-one schools was not realistic. One of my first reflections was realizing it was reasonable to start small, that this research could be the first cycle of inquiry. For example, there was no baseline staffing data for ISABC schools, so I would have to gather my own. Interviewing a female leader or aspiring leader in every school was reduced to interviewing six.

As I began to refine my questions for personal interviews I realized they were based on some big assumptions. Firstly, that there were fewer women than men in independent school leadership. Secondly, I assumed that there were barriers and a lack of resources that were obstructing the progression of female leaders. I decided that my data collecting methods had to address these assumptions head on. Accordingly the survey data collected from responding schools is presented below.

Table 1. Percentage of women and men in teaching faculty, Middle and Senior leadership teams and Heads of school in all respondent ISABC and Co-educational ISABC schools

	All Schools (%)	Co-Ed (%)
Faculty		
Women	69	66
Men	31	34
Middle Leadership team		
Women	69	66
Men	31	34
Senior leadership team		
Women	59	50
Men	41	50
Head of School		
Women	38	24
Men	62	76

Analyzing data was complicated; I wasn't sure how to make comparisons. Between large and small schools? Boarding and non-boarding? Single sex versus coeducational? I decided the only relevant comparison was coeducational schools versus all schools. I was pleasantly surprised to see there are more female leaders than I realized in ISABC schools. I was also shocked to see only 31 to 34 percent of the faculty is male. This is an important statistic to be aware of in terms of hiring and ensuring that there is equality and role models for our students.

The interviews of current and former female ISABC leaders were intriguing and the greatest source of variation. The older leaders, at the end of their careers, described a dichotomy of experience regarding the role of gender in their leadership experience. They were pioneers without female mentors or role models; they often 'played like guys' in a male-dominated arena. They encountered a lot of support from their male peers, parents, and faculty, but also blatant sexism. Interestingly they didn't feel that their decision to have families affected their careers, whereas for younger leaders, the 'juggling' of family needs and responsibilities was reported to be the primary barrier to their career.

Many of the women felt they had to work harder than their male peers to achieve the same position, and that they were watched more closely than the men. Universally participants were enthusiastic about ISABC and the leadership development programs put in place. They felt the programs were equal access and an important way for women to network. In terms of recommendations to ISABC, networking opportunities, mentorship and leadership programs were all asked for.

My final reflection is how interesting it has been to see and hear my peers' reactions to this project. Responses have ranged from, "You are brave!" to "It is so important that you are making people aware!" to "Oh, I've heard about this project." Truly this research was born out of my own curiosity; I've given little consideration to anything other than a positive response. I'm left with far more questions than I started with, which led to a promptly repressed impulse to do a Ph.D.

CONCLUSION:

A striking finding is that despite making up 66 percent of the teaching faculty across respondent ISABC schools, women only make up 38 percent of the Heads of school (see Table 1). If only coeducational schools are analyzed, the proportion drops to 24 percent. This finding is not surprising when compared to the literature. Grogan & Shakeshaft (2010) found that "women still do not fill administrative positions in proportion to their numbers in teaching" (p. 28). As in higher education, the coeducational schools with female Heads are smaller institutions, generally with a student body of less than 500.

In terms of equal representation we have work to do. As captured by Grogan & Shakeshaft (2010, p. 15) "female leaders have access, they now deserve equity" there is still room for growth within all fields of education. The composition of our leadership sends a message to our students and faculty whether they are male or female. However it is important to recognize that there is a great deal of female leadership within ISABC schools (see Table 1), particularly at the Middle and Senior Leadership Team levels. The key places for equal representation are Heads of School, where women are underrepresented, and our teaching faculty, where there are fewer men.

As with any rich research, there are more questions and opportunities for future investigation. Why are there markedly less women in Headship positions than in the teaching faculty? Is it due to the "chilly climate" experienced by women in university academy (Huang, 2008)? Or is it due to the self-imposed beliefs and limitations reported by some of the interview participants and described by Sheryl Sandburg (2013) in Lean In: Women, Work, and the Will to Lead? A larger sample size and more thorough interviews would clarify the experiences of female independent school leaders. As "Gender-diverse boards have been shown again and again to have a positive impact on different measures of firm performance, especially when they include a critical mass of women" (Catalyst, 2013) the composition of independent school Boards of Directors would also be an interesting area to examine.

Finally, I suspect ISABC is a leader in independent school education in the matter of female leadership. What are the baseline proportions of male and female leaders in other independent school organizations? Perhaps we can share the systems and structures that have supported leadership within our schools and ISABC organization.

The ISABC is clearly a 'leading voice in education' already. The existing leadership development and research programs should be continued and networking opportunities for current and aspiring female leaders developed. In this way we can continue to model the open-minded pursuit of excellence we ask of our students.

  "In the future, there will be no female leaders. There will just be leaders."
  — Sheryl Sandberg, Lean In: Women, Work, and the Will to Lead

INTRODUCTION:

As the modern information environment has transformed from a world where knowledge was contained in books and libraries to one where knowledge and information can be accessed at the click of a mouse, so too have the needs of modern students evolved. With this evolution, modern school libraries and the role of Teacher Librarian must also evolve to meet the needs of our students.

My Action Research is a continuation of a journey that had started at our school a few years previously - the transformation of our school library to a Learning Commons model. While we had made significant progress in developing a more student centred program and resource centre in our physical space, we were missing the final key- the virtual space. As a result, the question I choose to focus on for this Action Research was How might we include the Grades 6-12 population at our school as more active participants in the their own learning journey through the development of a Virtual Learning Commons? The decision to focus on the Grades 6-12 community in our school was based on the fact that this is the age group that most significantly interacts with the digital world as a source of information and more importantly as an extension of their community.

By accessing this virtual world that students inhabit, the modern Learning Commons can create a vibrant and student centred extension of the learning community while engaging students in the learning process and giving them ownership.

REFERENCE TO LITERATURE:

My initial readings centred largely around the general concepts of the effects of the digital landscape on today's students.

I started with the following articles:

Prensky, Marc (2008). "Turning on the Lights" . Educational Leadership, 65(6), 40.

Todd, R. J. (2009). "There Is Knowledge to Be Gained". (cover story). School Library Media Activities Monthly, 25(10), 55.

Both of these articles helped frame my understanding of the role of the digital landscape in the lives of our students today. The Prensky article in particular used a powerful metaphor that stuck with me through the rest of the project. He makes the argument that our students have grown up in the light (of technology) and when they step into the classroom they are often forced back into the dark not because it is good for them, but because of an institutional fear to use technology in a meaningful and integrated way. (Prensky 2008) These articles helped me focus on how to make our Virtual Learning Commons space a meaningful and useful tool for the students.

The next step is greatly owed to Dr. Ruben Puentedura and his work:

Ruben R. Puentedura, As We May Teach: Educational Technology, From Theory Into Practice. (2009)

Dr. Puentedura is the creator of the SAMR theory of technological integration as outlined in the graphic below. This theory helped me frame many of my decisions moving forward and served as an

important check each step of the way to ensure I was proceeding in ways that were transformative and not merely substitutions.
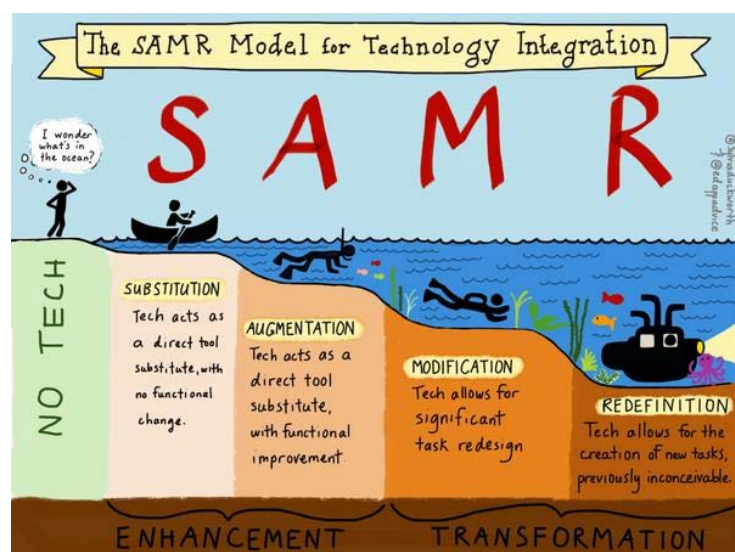

Image credit: Sylvia Duckworth, via @DavidGuerin

Once I decided on focusing on the Virtual Learning Commons, the following articles were instrumental in helping me explore the myriad of different ways Virtual Learning Commons can impact a school community:

Braaksma, B., Drewes, K., Siemens, G., & Tittenberger, P. (2007). Building a Virtual Learning Commons: What do YOU want to do?. IFLA Conference Proceedings, 1-17.

Brooks-Kirkland, A. (2009). The virtual library as a learning hub. School Libraries In Canada (17108535), 27(3), 43.

Loertscher, D. V., & Koechlin, C. (2012). The Virtual Learning Commons and School Improvement. Teacher Librarian, 39(6), 20-24.

Santos, I. M., Ali, N., & Hill, A. (2016). Students as Co-designers of a Virtual Learning Commons: Results of a Collaborative Action Research Study. Journal Of Academic Librarianship, 42(1), 8-14.

Schaffhauser, D. (2013). WILL THIS WEBSITE SAVE YOUR LIBRARY (and Your Librarians)?. T H E Journal, 40(11), 22.

While all of these articles helped me build a stronger understanding of the concept of a Virtual Learning Commons, it was the Santos (2016) article that really helped me crystalize the idea of the importance of involving students as co-designers and collaborators of the Virtual Learning Commons and it was from reading this article that I shifted my focus to include more student feedback and collaboration in our process.

Once I was able to gain the appropriate background knowledge and had realized the importance of the role of students in building a Virtual Learning Commons, I turned to the works of Loertscher, Koechlin and Rosenfeld and their book:

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Loertscher, D. V., Koechlin, C., & Rosenfeld, E. (2012). The virtual learning commons: Building a participatory school learning community. Salt Lake City, UT: Learning Commons Press.

This book was the foundation for the planning and construction stage of the Virtual Learning Commons, as it provided excellent theory surrounding the Virtual Learning Commons, as well as practical suggestions and templates for constructing one. I was able to use their work as a foundation to start with and it was from this foundation that my students and I were able to refine what we learned to suit the needs of our school community.

CONTEXT:

The Action Research was conducted at Southpointe Academy a K-12 school. While the focus of the study was Grades 6-12, the majority of the process specifically focused around Grades 6-8 students. Our school library has been transitioning to a Learning Commons model with specific focus given to student engagement in the Learning Commons. One of our first steps in bringing student voice into our Learning Commons was to establish a Library Ambassador program consisting of students from Grades 5-12. These students work in the library, but have also been instrumental in informing our programming and decisions throughout the transformation of our programs and our physical space into a Learning Commons. Initial interviews and surveys were conducted with students as I worked with them in library classes throughout the year. Once I decided to focus largely on the development of our Virtual Learning Commons, I worked closely with the Grades K-5 Teacher Librarian, the Director of Educational Technology and our Library Ambassador students to plan and develop the site.

METHODOLODY:

Prior to starting the action, more research was required to learn about the topic. After completing this research, the question was refined and initial data was collected in the form of usage statistics from and student feedback on our current Learning Commons website. The initial plan was to take this feedback, use it and what was learned through our readings to develop a design and implementation strategy for our new website and then launch the website and test it with several classes. Once the website was tested, we had intended to continue to refine, retest and relaunch the website as needed. It quickly became apparent, however, that we needed to add the element of student voice and we modified our plan to include our Library Ambassadors into every step of the process. We also realized that we would need more time in the planning stage and, at this point, we are still in the planning process as we continue to collect data through the feedback of the Library Ambassadors and students who have been involved in the planning process. |

PROCESS:

The initial step in this process was to first refine my question. I initially started this inquiry with the intention of exploring how the digital landscape could be used to help engage student readers. After reading around and about this topic, however, I kept returning to the concept of the importance of a virtual learning space as an extension of the physical Learning Commons. Much of the reading kept bringing me back to this idea that we can "foster a sense of community and create learning opportunities beyond the classroom by the application of Web 2.0 technologies, specifically social networks" (Braaksma, Drewes, Siemens, & Tittenberger 2007). One of the most profound changes we have seen in our school after transitioning to a Learning Commons model is the sense of community it has built. By opening the space into a collaborative learning centre where administration, teachers and, most importantly, students have a say in the development and use of the program and resources has been profoundly transformative to our school culture. Our virtual space, however, was still quite static and driven by the Teacher Librarians. I found that both myself and the K-5 Teacher Librarian would spend hours developing the website and the content, but it was still largely under-used. We had welcomed the student community into the physical Learning Commons, but not into the virtual space.

Because of this realization, I was able to transform my inquiry to How might we include the Grades 6-12 population at our school as more active participants in the their own learning journey through the development of a Virtual Learning Commons?

After refining my inquiry question based on my readings, I then focused on learning more about the Virtual Learning Commons model as outlined by the work of David Loerstcher, Carol Kochelin and Esther Rosenfeld (2012). I also attended two excellent workshops on the topic presented by Michelle Davis.

Loerstcher, Kochelin and Rosenfeld together with students at San Jose State University outline the Virtual Learning Commons as including:

- The Information Center - the opening page not unlike the traditional school library website containing portal entries into the sites listed below and provides linkages to the OPAC, other libraries, items of interest, calendar, etc.
- The Reading Culture - the world of literacy including reading, writing, speaking, and listening
- The Knowledge Building Center - the place where the learning commons interfaces with the great learning experiences across departments, grade levels, and the faculty of the school
- The Experimental Learning Center - that is home base for school improvement and professional development; a place for experimentation, action research, specific initiatives
- School Culture - the living school yearbook of the school including, performances, sports, exhibits, clubs, and other notable activities. (Loerstcher, Kochelin & Rosenfeld 2012)

Once I had this framework in place, the next step was to analyze our own Virtual Learning Commons. Like many of the readings stated, our Learning Commons site fell prey to the common model of being merely a portal for information that was very one-sided. Students and teachers could access our website to go to our catalogue and to use the database, but not much else. In fact, the user statistics provided by our website and the frequent emails I received from teachers and students asking where to find the catalogue and the databases were evidence that the Learning Commons website was rarely used.

Over the course of a month, while working with Grade 6-8 students in the library, I had students provide a written review of the Learning Commons website and how or if they used it for their assignment. After collecting this data, we sat down and began to sort through the responses. The common threads that began to emerge were that students didn't know the website existed, that it was difficult to navigate and that they had no reason to go there unless they needed access to the databases.

After gathering this data, we brought our Library Ambassador team on board. After attending Michelle Davis' workshops, I had been provided with links to many excellent Virtual Learning Commons that were interactive and student centred. The Library Ambassadors were given links to these websites and then were given free range to explore other websites they frequented and provide feedback on what they found engaging about these sites. The consistent themes that emerged from this feedback was that the sites they preferred were dynamic. They had pictures of student life, had interactive elements like student polls and voting options, had book trailers and book reviews created by students and had social media elements such as Twitter feeds. The common words we kept hearing over and over again were student focused and student created. This moment was a particularly powerful one as it helped us crystalize the fact that the most useful and engaging Virtual Learning Commons site would be one where there is significant student contribution to the development of the site, the content of the site and the running of the site.

This now brings us to the stage we are at right now. We have a keen group of Library Ambassadors who are helping us plan the new Virtual Learning Commons site. We are currently in the

initial mapping and planning stage, but the decided upon elements have been to structure the site in the manner as outlined by Loerstcher, Kochelin and Rosenfeld. The students have also begun to create original content in the form of book trailers and book reviews.

The steps we will take from here will be to complete the building of the website itself and to hopefully launch it in the next school year. The intention is to then monitor usage of the site and to conduct more student feedback sessions on the new site to gauge whether the new model has had any impact on the purpose and use of the website. We would also like to continue to explore ways to have more students become contributors to the site beyond the Library Ambassadors who are our primary contributors at this point.

LEARNING STATEMENTS AND FINDINGS:

As we are still in the middle of the process, it is difficult to come to a final evaluation. At this point, we do not know if our efforts will have any impact on student engagement in the larger school body. What we can evaluate, however, is the impact it has had on our group of Library Ambassadors. Perhaps the most transformative parts of this process were unintended. While I started this process looking to develop student engagement in their learning through the development of the Virtual Learning Commons, one of the key findings happened when we involved our Library Ambassador students.

It quickly became apparent through working with these students that one of the most powerful ways to engage students in their learning is to give them ownership over it. As soon as we brought the student voice into the planning and building of the Virtual Learning Commons, we were finally starting to see results. Soon we had a team of students who were researching with us, planning with us, building and creating original content. There was not mark associated with this and it wasn't an assignment for a class, they were just ignited by the possibilities.

While we do not yet know whether our Virtual Learning Commons website will be a success, the larger success of this Action Research to this point is the level of engagement the students are having with the project. Middle School students in particular are often judged to be too young to take on a responsibility such as this or they are deemed too immature to have the responsibility, but one of the most powerful findings from this project has been that students can be powerful and important collaborators in developing elements that will enhance their school community. While I recognize the group of students I am working with right now are motivated students who are passionate enough about literacy to join the Library Ambassador program, I still think this is an important takeaway to remember that all our students have this potential when they are engaged in something that has real world stakes and that they feel connected with.

CONCLUSIONS:

Teaching is a series of Action Research moments. To be an evolving and effective educator, we must engage in a constant process of immersing ourselves in the latest research, transforming our practices based on it and reflecting on what we have accomplished and learned. I entered this process with a very clear idea of what I wanted to accomplish, but it soon became clear that Action Research is a process that will be constantly changing and one whose timelines will need to be adjusted as your goals shift with new findings. Where I am now in the process is not where I started, or where I intended to be and I am nowhere near the end, but it has brought me to important realizations and the understanding that the process is often more important than the outcomes.

What is perhaps one of the most important things we must remember, however, is that our students must always be a part of this equation. The students we have in our classrooms today are children of the digital world. Instead of ignoring this, we must consider how to transform our teaching and our community to take this into consideration. The Virtual Learning Commons can be a powerful platform for student voice and student engagement. This is only the case, however, when you include students as collaborative partners in the journey to transform our school community.

<u>Appendix</u>

How Harkness changed my Assessment Practises: A collaborative and inquiry-based environment results in more diagnostic and formative criterion-referenced sssessments
Ira Alexandra – Southridge School

<u>Figure 1</u>

1. Since the introduction of Harkness at Southridge, have your marks improved or suffered? Please provide a reason for your answer.

2. What types of assessment are you good at in general?

3. What types of assessment would best reflect your learning in a Harkness setting?

4. What types of skills do you use in a Harkness classroom in Social Studies, that you did not use prior to the Harkness style of learning?

5. What types of assessment do you find are most useful to you: unit tests or daily quizzes? Why?

6. What other questions or comments do you have about assessment and Harkness in Social Studies?

7. Is there a type of assessment you would like to see more of?

<u>Figure 2:</u>

You Tube. "Ira Alexandra's You Tube Station."
https://www.youtube.com/watch?v=j3LIS6JI1R4&index=1&list=PLa5SZANmWAy74NbHhIv6AYtRimsZV53cI

Figure 3:

Grade 11 student:

T1 evaluation:

- Inconsistent performance in google docs (getting readings done every night?)
- Where annotating work?
- Gets into conversation every class
- Goal: Need to make more text referencing

T2: - personally feels doing better - able to spend more time on SS completing the readings and understanding the material

- Organizing notes that are hand written with dates
- Take notes on textbook on computer because can read and type at same time
- Ensure complete forms even when not at school
- Goal: redo forms before a test as review
- Text referencing happening every class
- Goal: wants to ensure she stays on top of her work and doing all the readings

T3: Took notes on the computer

- Redid forms as per her goal
- Stayed on top of the readings
- Not certain got anything out of discussions - can hear different people's opinions
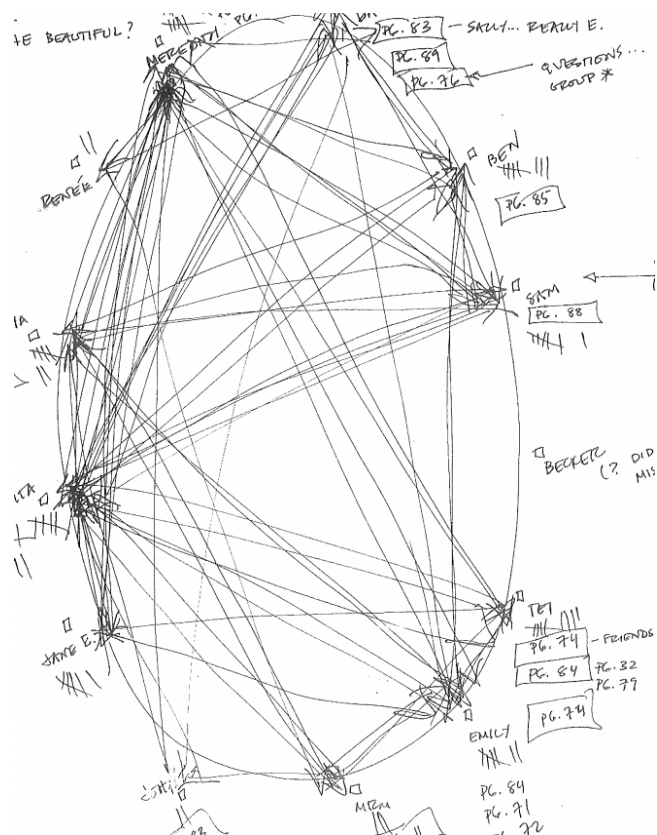- Kept notes organized on one document

Figure 4:

Extended Response Rubric

Criteria	1 = Limited	2 = Fair	3 = Proficient	4 = Excellent
Quality argument or position (introduction)	Contains no thesis or a thesis that does not address the question	Contains a confused or unfocused thesis (argument or position)	Contains a thesis (argument or position) that is presented in a focused introduction	Contains a clear, well-developed thesis (argument or position) that is presented in an engaging introduction
Quality of details and examples (supporting arguments)	Supports thesis in the body paragraphs with little or no accurate or relevant information	Supports thesis in the body paragraphs with limited accurate relevant information	Supports thesis in the body paragraphs with specific, accurate, and relevant information	Supports thesis in the body paragraphs with substantial, specific, accurate, and relevant information
Quality of interpretation (supporting arguments)	May provide little or no analysis	May provide minimal analysis	Generally has thoughtful analysis	Has consistently insightful analysis
Quality of Organization (conclusion)	May lack any organization and/or include unclear writing that is not developed	May include minimal organization and/or unclear writing that is not developed	Shows acceptable organization and is well-written, including a relevant conclusion	Is logically written, including a meaningful conclusion
Quality of Writing	May contain significant language errors (spelling, punctuation, grammar, etc.)	May contain numerous language errors (spelling, punctuation, grammar, etc.)	May contain some language errors (spelling, punctuation, grammar, etc.)	May contain few language errors (spelling, punctuation, grammar, etc.)

Rubric Conversion Chart

Rubric Descriptor	Rubric Level	Letter Grade	Numerical Score	Percentage Rank (Southridge Scale)	Percentage Points (Southridge Scale)
Excellent (Expert)	4	A++ A+ A A-	8.6-10	86-100%	100 95 90 86
Proficient (Practitioner)	3	B+ B B-	7.5-8.5	73-85%	85 80 73
Fair (Apprentice)	2	C+ C C-	6-7	60-72%	72 65 60
Limited (Novice)	1	C- C-	5-5.5	50-55%	55 50
Incomplete	Incomplete	I	Incomplete	Incomplete	Incomplete

Rubric conversion chart (adapted from Damian Cooper, 2015)

Figure 5:

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The Virtual Learning Commons - A Student Centred Approach
Pamela McMartin – Southpointe Academy

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