

Lynne Siemens  
University of Victoria

### Implementing New Knowledge Environments (INKE)

#### Abstract

*Background:* This article examines Implementing New Knowledge Environments' (INKE) experiences as a mature, large-scale collaboration working with academic and non-academic partners and provides some insight into best practices. It looks at the sixth year of funded research.

*Analysis:* The study uses semi-structured interviews with questions focused on the nature of collaboration with selected members of the INKE research team. Data analysis employs a grounded theory approach.

*Conclusion and implication:* The interviewees found the experience of collaborating within INKE to be positive with some ongoing challenges. The team is winding down as it moves into the final year of funded research. This suggests an arc of collaboration, with intensity of collaboration building from the first year to the most intensive time in the middle years and then winding down in the last years of grant funding. This article contributes to those lessons about collaboration by exploring the lived experience of a long-term, large-scale research project.

*Keywords:* Collaboration; Networked scholarship; Research teams; Digital humanities; INKE



Source: XXXXXX

**Lynne Siemens** is Associate Professor in the School of Public Administration at the University of Victoria, University of Victoria, 3800 Finnerty Road, Victoria, BC, Canada V8N 1M5. Email: [siemensl@uvic.ca](mailto:siemensl@uvic.ca).

**INKE** (Implementing New Knowledge Environments) is a collaborative research group exploring electronic text, digital humanities, and scholarly communication. The international team involves over 42 researchers, 53 graduate research assistants, 4 staff, 19 postdoctoral fellows, and 30 partners. Email: [etcl@uvic.ca](mailto:etcl@uvic.ca).

CISP Press  
*Scholarly and Research Communication*  
Volume 7, Issue 2, Article ID 0201250, 8 pages  
Journal URL: [www.src-online.ca](http://www.src-online.ca)  
Received May 31, 2016, Accepted August 10, 2016, Published November xx, 2016

Siemens, Lynne & INKE. (2016). Faster Alone, Further Together: Reflections on INKE's Year Six. *Scholarly and Research Communication*, 7(2): 0201250, 8 pp.

© 2016 Lynne Siemens & INKE. This Open Access article is distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc-nd/2.5/ca>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## Introduction

As has been argued previously (Siemens & Burr, 2013; Siemens & INKE Research Group, 2012a, 2012b, 2012e, 2013, 2014, 2015), humanists are engaging team research as a way to undertake projects that are too large in size and complexity to be completed by a single researcher. Granting agencies are encouraging this trend with new funding programs that support larger-scale research (Office of Digital Humanities, 2010; Social Sciences and Humanities Research Council, 2013). While researchers and other associated team members welcome these collaborations as a way to undertake these kinds of projects (Siemens & Burr, 2013; Siemens, Cunningham, Duff, & Warwick, 2011), work still needs to be done to prepare individuals for working within a team where interdependent tasks must be coordinated, knowledge and progress must be communicated, and an overall research vision must be accepted and enacted (Hara, Solomon, Kim, & Sonnenwald, 2003; Lawrence, 2006; Newell & Swan, 2000).

To this end, teams often conduct a post-mortem exercise to understand lessons learned about collaboration and develop best practices for other team-based projects (for example, see Bracken & Oughton, 2006; Bryan, Negretti, Christensen, & Stokes, 2002; Dombrowski, 2013; Kishchuk, 2005; Trnka, 2008; Williford & Henry, 2012; Yu, Lau, & Lee, 2012). While useful, reflection at a project's end may mean that some lessons are minimized or forgotten. Consequently, there is much to be learned by examining a collaboration in progress. As part of a larger study that focuses on the lived experiences of a long-term project, Implementing New Knowledge Environments (INKE), this article contributes to this discussion with a focus on an exploration of a mature and effective collaboration as it nears completion. It also builds upon earlier reflections (Siemens & INKE Research Group, 2010a, 2010b, 2011, 2012b, 2012c, 2013).

## Case study

Funded through Canada's Social Sciences and Humanities Research Council's Major Collaborative Research Initiative granting program (Social Sciences and Humanities Research Council, 2010), the INKE research project is a seven-year, multidisciplinary project with 35 active researchers plus postdoctoral fellows, graduate research assistants, and partner organizations across four countries and with a budget of approximately \$13 million of cash and in-kind funding (INKE, 2012). Spanning seven years, it is focused on studying "different elements of reading and texts, both digital and printed" and contributing "to the development of new digital information/knowledge environments" (Siemens, Warwick, Cunningham, Dobson, Galey, Ruecker, Schreiber, & INKE Research Group, 2009; Social Sciences and Humanities Research Council, 2009, 2010). Originally four sub-research areas, the team is now divided into two areas with a focus on Modelling and Prototyping (MP) and Interface Design (ID). (For a discussion on reasons for reorganization, see Siemens & INKE Research Group, 2012a; Siemens & INKE Research Group, 2012d). In the fourth year of funded research, INKE also underwent a midterm review where it reported on its research outcomes relative to the grant application, initial project planning, and ongoing yearly plans. Beyond reading the report, the review panel interviewed the administrative team, researchers, partners, and past and present graduate research assistants and postdoctoral fellows to understand research outcomes and collaboration and administrative processes. Ultimately, this review determined whether INKE's research funding should continue

for the remaining half of the grant project. Based on its demonstrated productivity and collaboration, the project was renewed. Now in its sixth year of funded research, the team is considering future research directions and partnerships with a focus on open social scholarship within Canada (INKE, 2014a).

## **Methodology**

Though semi-structured interviews, members of the administrative team (AL), researchers (R), graduate research assistants (GRA), and others are asked about their experiences collaborating within INKE on an annual basis in order to understand the nature of collaboration and ways that it may change over a grant's long-term life. The interviews were conducted primarily through Skype with one in-person session. The interview questions focus on understanding the nature of collaboration and its associated advantages and challenges within INKE's context. These interviews allow the researcher to explore topics more fully and deeply with probing and follow-up questions, while participants reflect on their own experiences and emphasize those issues that are important to them (Siemens & INKE Research Group, 2012b, 2012c). This article focuses on interviews that are centred on the project's sixth year.

Data analysis involves a grounded theory approach that focuses on the themes that emerge from the data. This analysis is broken into several steps. First, the data is organized, read and coded to determine categories, themes and patterns. These categories are tested for emergent and alternative understandings, both within a single interview and across all interviews. This is an iterative process, involving movement between the data, codes, and concepts, constantly comparing the data to itself and the developing themes (Marshall & Rossman, 1999; McCracken, 1988; Newell & Swan, 2000; Rubin & Rubin, 1995).

## **Findings**

The findings focus on year six activities, collaboration as a positive experience, challenges, and year seven and beyond.

### *Focus of year six*

As the second to last year of a seven-year grant, year six has been the start of the project's wind-down period (AL1, AL2, AL4)<sup>1</sup> with a focus on completing and launching projects and prototypes with partners, rather than starting new research (GRA1, AL1, AL4). This has led to a greater focus on relationships with the various partners who put the research into practice (R1, AL3, AL4). As a result, less collaboration between the sub-research areas exists (AL1). Lastly, for some interviewees, their attention has shifted to the new grant application, away from the present one (AL1, AL2).

### *Collaboration as positive experience*

After six years of collaborating, the INKE team is still very positive about the experience. They realize they can do more together as a team than would otherwise be possible. As suggested by one researcher (R1), while it is faster to do things alone, it is possible to go further when working in a team. Echoed by others, team members find it very exciting to be part of a group of brilliant people working together to common

goals (R2) and sharing ideas (AL1). And as outlined earlier (Siemens & INKE Research Group, 2015), this collaboration has led to projects beyond this team with INKE members and others (AL1, AL2, AL3). Further, the lessons gained by being part of this collaboration are being applied to other projects, again beyond INKE (R1). Finally, having co-leads in one sub-research area has meant that one could step in for the other if necessary, a benefit to both (AL1, AL2).

In terms of relations between team members, one interviewee stated a realization that team members are now familiar with each other professionally and personally (R2), which brings a level of comfort to the working relations (AL2). Another one commented that the sub-research areas are working well together, and that leadership is well understood with colleagues accountable to each other (AL3). These relationships have been built over the years through Birds of a Feather gatherings, partner meetings, and other places (R1, AL1). Providing a foundation for regular calls and emails, these opportunities also allow the team to “power up for the next year” (R1). The governance documents<sup>2</sup> continue to keep these relationships going; however, this depends on everyone signing on with an investment in the team’s larger goals (R2). As a final sign of this positive experience, the interviewees (AL3) indicated that they wanted to keep working together with a new grant application.

At the same time, however, the nature of collaboration is changing (AL4). For example, interviewees realize that the focus has shifted to completing projects and is less on work between sub-research areas and the team as a whole (AL1, AL2, AL4). This points to the different levels of collaboration – within sub-research areas, in the larger team, and with industry partners – that exist within the project (AL4). Despite these changes, one interviewee commented this collaboration has occurred along the way, not through a single interaction (AL4).

### *Ongoing challenges*

The team continues to experience some ongoing challenges. For some administrative leads (AL2), a realization that the administrative work does pull one away from direct research, meaning that they miss out on some of the “fun stuff” associated with it, exists. For others, a challenge is the lack of time that comes with busy people being pulled in many different directions (R2). As found in earlier reflections (Siemens & INKE Research Group, 2015), the distance between team members and partners impacts the ability to communicate and collaborate easily with each other (R1).

Also, as highlighted in year two (Siemens & INKE Research Group, 2012a), there are ongoing challenges with GRAs and postdoctoral fellows, ranging from attraction and retention (AL3), to ensuring that they are integrated into the larger team (R1), to getting opportunities to be directly involved in the research and present papers at conferences (AL1). However, the interviewees found ways to work with the GRAs and postdoctoral fellows to address these challenges. The end result is graduate and undergraduate students’ and postdoctoral fellows’ growing professionalization (R1, AL3). One metric of the success is that INKE GRAs and postdoctoral fellows are getting jobs in academic and academic-adjacent areas (AL3) and contributing to the larger community (GRA1). Subsequently, INKE has found ways to keep working with

these individuals on various other projects after they are based elsewhere (AL<sub>3</sub>). These efforts also remain positive for the research assistants and postdoctoral fellows. One student wrote a note of thanks for the experience to their supervisor and indicated that the involvement in INKE showed how important collaboration in the Humanities is (AL<sub>1</sub>). Another GRA indicated that they saw the way that collaboration can produce knowledge and was appreciative of the way that they could help shape discussion around the research, not merely add to it. (GRA<sub>1</sub>).

### *Looking forward to year seven and beyond*

As INKE approaches year seven, the team is making decisions around wind down and maintenance for next stages (AL<sub>3</sub>) while, at the same time, energies are turning toward reapplication (AL<sub>1</sub>, AL<sub>2</sub>). One focus of these next steps is to find ways to bring on new researchers and partners who understand the nature of engagement developed through INKE (AL<sub>3</sub>) and are interested in aligning their individual goals with those of the next project that is research driven and accountability focused (R<sub>1</sub>, R<sub>2</sub>, AL<sub>1</sub>, AL<sub>3</sub>, AL<sub>4</sub>). Given the new members, INKE may need to undergo a process of developing working norms and accountability structures. However, this should be easier because there is a large cohort of present INKE researchers and partners that will be part of the next stage and already know how and why to collaborate together within preexisting functional structures (AL<sub>3</sub>). At the same time, one administrative lead noted that INKE cannot bring everything forward, because new things may be learned from the new researchers and partners (AL<sub>4</sub>).

### **Discussion**

These yearly interviews continue to be useful. They highlight the trends in benefits and challenges within this collaboration as well as the ebb and flows of a large-scale collaboration such as INKE. Other teams may find it useful to do the same, thus adding to our body of knowledge about the ways that collaboration actually happens.

As highlighted previously (Siemens & INKE Research Group, 2014, 2015), INKE is a mature and productive collaboration, now nearing the end of its funded research cycle. The team continues to find collaboration to be a positive experience and sees the benefits of working together. Despite the members' familiarity with each other and the INKE working culture, the team still finds face-to-face meetings necessary to strengthen, deepen, and recharge the collaboration between team members and its partners, as was the case in early years when the collaboration was being established (Siemens & INKE Research Group, 2012a, 2013). It is from this foundation that the team can effectively sustain itself with conference calls and emails during the year.

The team is also finding that change and transition are constants within a large-scale and long-term project such as this (Siemens & INKE Research Group, 2013). Within this year, the main change has been the nature of the collaboration itself. As the team winds down its time together, completes projects and hands them over to partners, the amount and intensity of collaboration within a sub-research area and across them is decreasing, relative to the intensity during the middle years of collaboration. This suggests that there is an arc of collaboration, where intensity is building from year one and reaches a peak in the middle years and then declines in the later ones. This also

supports the concept of different layers of collaboration within a team initiative (Siemens & INKE Research Group, 2014).

Finally, despite the long history of working together, some challenges remain ongoing. As the interviews suggest, distance between team members and partners remains an issue, one not easily overcome when a team is spread so far geographically (Siemens & INKE Research Group, 2014). In addition, attraction and retention of postdoctoral fellows and research assistants remains an issue in every year since year two (Siemens & INKE Research Group, 2012a). This might be best characterized as a positive problem, as INKE has shown itself in providing career-building experiences for these individuals, ones that they have fully embrace (Siemens & INKE Research Group, 2012a, 2014, 2015).

Finally, INKE has begun to think about next steps, both in terms of research and also relationships with current researchers and partners as well as new ones (Siemens & INKE Research Group, 2015). The current governance documents and working culture will serve as the foundation for next steps; however, these may be modified as necessary to fit the context of the new grant application. At the very least, members of the proposed next steps have been meeting for several years to develop the sense of team and joint objectives, laying important ground work (INKE, 2014a, 2014b, 2014c). It remains to be seen exactly how this will translate to a new project if the grant application is successful.

All in all, INKE has proven to be a successful collaboration, navigating ongoing challenges while capitalizing on the many benefits that come from a project such as this. Much as been learned in the process that will translate to other teams as they undergo their own collaborations.

### Notes

1. Individuals will be identified by abbreviation for the group that they represent. For example, a graduate research assistant will be named as GRA1, an administrative lead as AL1 and researcher as R1.
2. The governance documents (Siemens & INKE Research Group, 2012c) outline the ways that the INKE team has agreed to work together in the spirit of the collaboration. All researchers and research assistants sign an agreement that outlines these principles before starting work on the project.

### References

- Bracken, L.J., & Oughton, E.A. (2006). "What do you mean?" The importance of language in developing interdisciplinary research. *Transactions of the Institute of British Geographers*, 31(3), 371-382.
- Bryan, L., Negretti, M., Christensen, F.B., & Stokes, S. (2002). Processing the process: One research team's experience of a collaborative research project. *Contemporary Family Therapy*, 24(2), 333-353.
- Dombrowski, Q. (2013). *What ever happened to Project Bamboo?* Paper presented at the DH 2013, Lincoln, NE. URL: <http://dh2013.unl.edu/abstracts/ab-287.html> [December 9, 2013].
- Hara, N., Solomon, P., Kim, S.-L., & Sonnenwald, D.H. (2003). An emerging view of scientific collaboration: Scientists' perspectives on collaboration and factors that impact collaboration. *Journal of the American Society for Information Science and Technology*, 54(10), 952-965.

- INKE. (2012). *Implementing new knowledge environments*. URL: <http://inke.ca> [September 22, 2012].
- INKE. (2014a). *Future directions*. URL: <http://inke.ca/projects/future-directions/> [November 3, 2014].
- INKE. (2014b). *Whistler gathering 2014*. URL: <http://inke.ca/projects/whistler-gathering-2014/> [January 9, 2015].
- INKE. (2014c). *Whistler gathering 2015*. URL: <http://inke.ca/projects/whistler-gathering-2015/> [January 11, 2015].
- Kishchuk, N. (2005). *Performance report: SSHRC's major collaborative research initiatives (MCRI) program*. Ottawa, ON: SSHRC.
- Lawrence, K.A. (2006). Walking the tightrope: The balancing acts of a large e-research project. *Computer Supported Cooperative Work: The Journal of Collaborative Computing*, 15(4), 385-411.
- Marshall, C., & Rossman, G.B. (1999). *Designing qualitative research* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- McCracken, G. (1988). *The long interview* (Vol. 13). Newbury Park, CA: SAGE Publications.
- Newell, S., & Swan, J. (2000). Trust and inter-organizational networking. *Human Relations*, 53(10), 1287-1328.
- Office of Digital Humanities. (2010). *Digging into data challenge*. URL: <http://www.diggingintodata.org/> [September 26, 2010].
- Rubin, H.J., & Rubin, I.S. (1995). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: SAGE Publications.
- Siemens, L., & Burr, E. (2013). A trip around the world: Accommodating geographical, linguistic and cultural diversity in academic research teams. *Linguistic and Literary Computing*, 28(2), 331-343.
- Siemens, L., Cunningham, R., Duff, W., & Warwick, C. (2011). A tale of two cities: Implications of the similarities and differences in collaborative approaches within the digital libraries and digital humanities communities. *Literary & Linguistic Computing*, 26(3), 335-348.
- Siemens, L., & INKE Research Group. (2010a). *The e-paper anniversary: Lessons from the first year of INKE*. Paper presented at the SDH/SEMI 2010, Montréal, QC.
- Siemens, L., & INKE Research Group. (2010b). *Understanding long term collaboration: Reflections on year 1 and before*. Paper presented at the INKE 2010 Conference. The Hague, Netherlands.
- Siemens, L., & INKE Research Group. (2011). "Firing on all cylinders": *Progress and transition in inke's year 2*. Paper presented at the Research Foundations for Understanding Books and Reading in a Digital Age: Text and Beyond, Kyoto, JP.
- Siemens, L., & INKE Research Group. (2012a). Firing on all cylinders: Progress and transition in INKE's year 2. *Scholarly and Research Communication*, 3(4), 1-16.
- Siemens, L., & INKE Research Group. (2012b). From writing the grant to working the grant: An exploration of processes and procedures in transition. *Scholarly and Research Communication*, 3(1).
- Siemens, L., & INKE Research Group. (2012c). INKE administrative structure: Omnibus document. *Scholarly and Research Communication*, 3(1).
- Siemens, L., & INKE Research Group. (2012d). *INKE at the midterm review*. Paper presented at the Research Foundations for Understanding Books and Reading in the Digital Age: E/Merging Reading, Writing, and Research Practices, Havana, Cuba.
- Siemens, L., & INKE Research Group. (2012e). Understanding long-term collaboration: Reflections on year 1 and before. *Scholarly and Research Communication*, 3(1), 1-4.
- Siemens, L., & INKE Research Group. (2013). Responding to change and transition in INKE's year three. *Scholarly and Research Communication*, 4(3), 12.
- Siemens, L., & INKE Research Group. (2014). Research collaboration as "layers of engagement": INKE in year four. *Scholarly and Research Communication*, 5(4), 1-12.

- Siemens, L., & INKE Research Group. (2015). "INKE-cubating" research networks, projects, and partnerships: Reflections on INKE's fifth year. *Scholarly and Research Communication*, 6(4).
- Siemens, R.G., Warwick, C., Cunningham, R., Dobson, T., Galey, A., Ruecker, S., Schreibman, S., & INKE Research Group. (2009). Codex ultor: Toward a conceptual and theoretical foundation for new research on books and knowledge environments. *Digital Studies/Le champ numerique*, 1(2).
- Social Sciences and Humanities Research Council. (2009). *Social Sciences and Humanities Research Council supports major new research initiatives*. URL: [http://www.sshrc-crsh.gc.ca/news\\_room-salle\\_de\\_presse/press\\_releases-communiqués/2009/mcri-grtc-eng.aspx](http://www.sshrc-crsh.gc.ca/news_room-salle_de_presse/press_releases-communiqués/2009/mcri-grtc-eng.aspx) [October 24, 2011].
- Social Sciences and Humanities Research Council. (2010, May 3, 2010). *Major collaborative research initiatives*. URL: [http://www.sshrc.ca/site/apply-demande/program\\_descriptions-descriptions\\_de\\_programmes/mcri-grtc-eng.aspx](http://www.sshrc.ca/site/apply-demande/program_descriptions-descriptions_de_programmes/mcri-grtc-eng.aspx) [May 19, 2010].
- Social Sciences and Humanities Research Council. (2013). *Partnership grants: An overview*. URL: [http://www.sshrc-crsh.gc.ca/about-au\\_sujet/partnerships-partenariats/partnership\\_grants-bourses\\_partenariats-eng.aspx](http://www.sshrc-crsh.gc.ca/about-au_sujet/partnerships-partenariats/partnership_grants-bourses_partenariats-eng.aspx) [December 9, 2013].
- Trnka, P. (2008). The process of large-scale interdisciplinary science: A reflexive study. In J.S. Lutz & B. Neis (Eds.), *Making and moving knowledge: Interdisciplinary and community-based research in a world on the edge* (pp. 222-244). Montréal, QC: McGill-Queen's University Press.
- Williford, C., & Henry, C. (2012). One culture: Computationally intensive research in the humanities and social sciences: A report on the experiences of first respondents to the digging into data challenge: Council on Library and Information Resources.
- Yu, W.-m., Lau, C.-k., & Lee, J. C.-k. (2012). Into collaborative research and co-authorship: Experiences and reflections. *Reflective Practice*, 14(1), 31-42.