

ATHABASCA UNIVERSITY

CHIMING IN: SOCIAL PRESENCE IN AN INTERNATIONAL MULTI-SITE
BLENDED LEARNING COURSE

BY

PEGGY LYNN MACISAAC

A DISSERTATION

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF EDUCATION IN DISTANCE EDUCATION

FACULTY OF HUMANITIES AND SOCIAL SCIENCES

ATHABASCA, ALBERTA

APRIL, 2021

(cc) PEGGY LYNN MACISAAC



Approval of Dissertation

The undersigned certify that they have read the dissertation entitled

CHIMING IN: SOCIAL PRESENCE IN AN INTERNATIONAL MULTI-SITE BLENDED LEARNING COURSE

Submitted by:

Peggy Lynn MacIsaac

In partial fulfillment of the requirements for the degree of

Doctor of Education in Distance Education

The examination committee certifies that the dissertation
and the oral examination is approved

Internal Co-Supervisor:

Dr. Mohamed Ally
Athabasca University

External Co-Supervisor:

Dr. George Siemens
University of Texas

Committee Member:

Dr. Terry Anderson
Athabasca University

External Examiner:

Dr. Asha Kanwar
Commonwealth of Learning

April 15, 2021

Dedication

To learners and educators working in higher education in emergencies.

Acknowledgement

This dissertation is built on data, in both expected and unexpected forms. The singular of word data is datum. The etymology of the word datum traces its origins to classical Latin “to give” with the same Indo-European base as “I give” in Sanskrit and Greek¹. Over the past seven and a half years of pursuing this doctorate, more than a hundred individuals have chosen to give me their encouragement, critique, and expertise. Their gifts have shaped my academic work.

I am grateful to the learners for allowing me to study their course communications and showing me the transformative impact of connecting learners socially, internationally, and purposefully. I am grateful to Director Don Diplo for inviting me to work with him in the BHER program and allowing this research to progress.

I have deeply relied on my supportive family and friends including my son Luka; my friends from UBC, Athabasca University, and data libraries across Canada; colleagues from University of Geneva’s Summer Institute of Higher Education in Emergencies; and Cohort 6 members, past and present, who have been breathing life into our parallel academic journeys. Connecting with Ed.D. students, candidates, and graduates from many different cohorts, stretched my understanding of and excitement for open and distance learning.

¹ Oxford University Press. (2012). Datum. In *Oxford English Dictionary Online*.

<http://www.oed.com>

To Drs. George Siemens, Mohamed Ally, and Terry Anderson, I thank you for rigorously guiding the process, critiquing my research, and sharing your social network connections to draw upon global expertise, all the while encouraging me to expand my views. I appreciate the insight and perspectives of Professor Asha Kanwar, my external examiner for the final oral exam, and thank Dr. Fuhua (Oscar) Lin for serving as examiner for my proposal defence. Your individual impacts resonate throughout the finished work to make it stronger.

Abstract

This mixed methods action research study investigates one international multi-site blended learning class comprised of refugee and non-refugee learners. The interventionary action of this study used WhatsApp mobile instant messaging (MIM) to increase and sustain online course discussions, for which no part of the final grade was assigned to online participation. The MIM messages were coded for indicators of the Community of Inquiry social presence, and then analyzed for correlation to final grade. For this population of learners living in Canada, Thailand, and Kenya, affective social presence is a negative predictor of final grade and cohesive social presence is a positive predictor. More specifically, learners achieving grades of 85% or higher expressed less self-disclosure and more group references and phatic messages as a percentage of the total messages sent expressing social presence than other learners.

The study uses arts-based first-person reflections to explore the experiences of the researcher in conducting this action research and openly releasing its source data. Writing, mathematics, and visual arts are the three primary modes of documenting, analyzing, and reporting the findings of this study. An innovative presentation of data emerges as mathematically sound. This study shares the successful steps in obtaining ethical approval to preserve data for unlimited secondary use. Obtaining participant consent for their data to be used for unlimited secondary use may have potentially positive ethical consequences for conducting further research involving refugees living in fragile contexts.

Keywords: social presence, refugee, mobile instant messaging, grade, higher education in emergencies, Community of Inquiry, open data, ethics, arts-based research

Preface

A puzzle-game summary of this dissertation research can be found at:

<https://peggy-lynn-macisaac.ca/portfolio/study-puzzle/>

Table of Contents

Approval of Dissertation.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Abstract.....	vi
Preface.....	vii
Table of Contents.....	viii
List of Tables.....	xii
List of Figures.....	xiv
Definition of Abbreviations.....	xvi
Definition of Terms.....	xvii
Chapter 1. Introduction and Theoretical Framework.....	1
Introduction.....	1
Background and Statement of Problem.....	3
Purpose.....	9
Research Questions.....	10
Limitations and Delimitations.....	10
Outcomes and Significance of Study.....	11
Chapter One Summary.....	12
Chapter 2. Review of the Literature.....	14
Introduction.....	14
Higher Education in Emergencies.....	15
Global Context of Persons of Concern.....	15
International Adult Distance and Blended Education.....	20
Education.....	20
Adult Education.....	22
Distance Education.....	26
Blended Learning.....	30
International Education.....	33
Measures.....	35
Researcher Reflection.....	35
Social Presence.....	39
Academic Performance.....	46
Learner Gender.....	50
Gender and Academic Performance in Distance Education.....	51
Gender and Persons of Concern.....	55
Gender and Social Presence.....	60
Learner Locale.....	62
Mobile Instant Messaging.....	65

Social Media	65
Mobile Instant Messaging in Education	66
WhatsApp and Persons of Concern	70
Implications for Measuring Social Presence in MIM	72
WhatsApp in EDUC3711	75
Open Movement	76
Open Enrolment	76
Open Publishing	77
Open Data	77
Chapter Two Summary	79
Chapter 3. Methodology	80
Theoretical Underpinnings	80
Ontology, Epistemology, and Axiology	81
Paradigm and Research Methodology	88
Research Questions	91
Research Design	91
Role of the Researcher	91
Population and Sampling	92
Ethics Considerations	94
Data Collection	97
Participant Names	97
Mobile Instant Messages	99
Final Grades, Gender, and Locale	103
First-Person Arts-Based Research Reflections	104
Data Preparation	104
Anonymize	104
Coding Instrument	106
Methods of Analysis	109
Assumptions	110
Limitations	111
Delimitations	113
Reliability and Validity	114
Chapter Three Summary	116
Chapter 4. Quantitative Results	118
Data Coding	118
Summary of Data	121
Correlation Data Preparation	121
Demographics of Participants	121
Statistical Cases	122
Aggregation of Variables	123
Correlation Results	126
Benchmarks for Significance and Strength	126
Correlation Results for Case All	127
Correlation Results for Case Males	129

Correlation Results for Case Females.....	130
Correlation Results for Case Canada-Based.....	131
Correlation Results for Case Kenya-Based.....	132
Correlation Results for Case Thailand-Based.....	132
Correlation Results for Case Canada-Based Females.....	134
Correlation Results for Case Kenya-Based Males.....	135
Correlation Results for Case Thailand-Based Males.....	136
Correlation Results for Case Thailand-Based Females.....	137
Correlation Results for Case Group 11.....	138
Correlation Results for Case Group 12.....	139
Correlation Results for Case Group 13.....	140
Correlation Results for Case Group 14.....	141
Correlation Results for Case Group 16.....	142
Correlation Results for Case Group 17.....	142
Correlation Results for Case Group 18.....	144
Correlation Interpretations.....	145
Addressing Assumptions of Total Messages with Grade and Social Presence.....	145
Impact of Excluded Cases.....	146
Impact of Using Significance Level to 0.10.....	147
Correlations Summary.....	152
Regression Analyses.....	154
Regression Results for Case All.....	154
Regression Results for Case Males.....	157
Regression Results for Case Thailand-Based.....	160
Regression Results for Case Thailand-Based Males.....	163
Chapter Four Summary.....	166
Reflection on Quantitative Data Collection and Analysis.....	168
Chapter 5. Qualitative Results.....	171
Origin of the Action.....	175
2016 Iteration of Course.....	177
2017 Iteration of Course.....	179
Ethical Approval to Study the Intervention of the 2017 Course.....	180
Reflection on the Intervention of the 2017 Course.....	185
2018 Iteration of Course.....	188
Implementation of the Action.....	189
Ethical Approval to Release Data Openly.....	189
Reflection of the Action.....	191
Visual Analogy.....	198
Chapter Five Summary.....	223
Chapter 6. Discussion and Conclusion.....	225
Alignment of Study and Course Being Studied.....	225
Executed Methodology.....	226
Ethical Issues and Resolution.....	228
Identified Limitations.....	228

Identified Delimitations.....	229
Reflection on Significance	230
Future Research.....	231
Reflections on Key Findings	232
References.....	236
Appendix A: AU Research Ethics Board Approval	280
Appendix B: York University Human Participants Review Committee Approval	281
Appendix C: Informed Consent Letter	283
Appendix D: EDUC3711 Course Description and Objectives	285
Appendix E: Nuremberg Code.....	287
Appendix F: Moodle Poll Questions and Responses	288

List of Tables

Table 1 Comparison of Demographics for Consideration in Sampling.....	93
Table 2 Conversion of York University Grading Scheme.....	103
Table 3 Social Presence Indicators Coding Instrument.....	108
Table 4 Intercoder Reliability.....	119
Table 5 Participant Data at Indicator Level of Social Presence.....	120
Table 6 Demographics of Participants.....	121
Table 7 Case Sizes.....	122
Table 8 Participant Data at Category Level of Social Presence.....	124
Table 9 Pearson Correlation Coefficients for Case All.....	128
Table 10 Pearson Correlation Coefficients for Case Males.....	129
Table 11 Pearson Correlation Coefficients for Case Females.....	130
Table 12 Pearson Correlation Coefficients for Case Canada-Based.....	131
Table 13 Pearson Correlation Coefficients for Case Kenya-Based.....	132
Table 14 Pearson Correlation Coefficients for Case Thailand-Based.....	133
Table 15 Pearson Correlation Coefficients for Case Canada-Based Females.....	134
Table 16 Pearson Correlation Coefficients for Case Kenya-Based Male.....	135
Table 17 Pearson Correlation Coefficients for Case Thailand-Based Male.....	136
Table 18 Pearson Correlation Coefficients for Case Thailand-Based Females.....	137
Table 19 Pearson Correlation Coefficients for Case Group 11.....	138
Table 20 Pearson Correlation Coefficients for Case Group 12.....	139
Table 21 Pearson Correlation Coefficients for Case Group 13.....	140
Table 22 Pearson Correlation Coefficients for Case Group 14.....	141

Table 23	Pearson Correlation Coefficients for Case Group 16	142
Table 24	Pearson Correlation Coefficients for Case Group 17	143
Table 25	Pearson Correlation Coefficients for Case Group 18	144
Table 26	Correlation Between Total Messages and SP Count	146
Table 27	Comparison of Results by Strength and p Value	148
Table 28	Summary of Significant “Count” Correlations for Each Case	149
Table 29	Summary of Significant “Percent” and “Ratio” Correlations by Case	150
Table 30	Learners from Cases with Correlations Between CO Ratio and Grade.....	154
Table 31	Key Regression Statistics for Case All	155
Table 32	Key Regression Statistics for Case Males	158
Table 33	Key Regression Statistics for Case Thailand-based	161
Table 34	Key Regression Statistics for Case Thailand-based Males.....	164
Table 35	Summary of Regression Results for the Four Population Samples	166
Table 36	Learners from Cases Used in Regression Analyses.....	167
Table 37	Summary of Descriptive Data by Group	220
Table 38	Summary of Ranked Comparisons of Groups	222

List of Figures

Figure 1 WhatsApp Mobile Instant Messaging Chat Interface	99
Figure 2 Raw Data Text Files	100
Figure 3 Raw Data Text Files with Hard Returns Removed	101
Figure 4 Converted Raw Data into Bar Delimited Fields	101
Figure 5 Example of Correctly Imported Raw Data File into Excel Spreadsheet	102
Figure 6 Example of Incorrectly Imported Raw Data File into Excel Spreadsheet.....	102
Figure 7 Illustration of Refugee Learners in Group Study Session in Thailand.....	105
Figure 8 Excel Display of Anonymized Data	106
Figure 9 Case All: Regression Histogram and P-P Plot	156
Figure 10 Case Male: Regression Histogram and P-P Plot	159
Figure 11 Case Thailand-Based: Regression Histogram and P-P Plot	162
Figure 12 Case Thailand-Based Males: Regression Histogram and P-P Plot	165
Figure 13 Life Cycle of Quantitative Data Coding and Analysis.	169
Figure 14 Refugee Inspired Reflective Art	172
Figure 15 Contents of One Syrian Refugee’s Bag	173
Figure 16 Film Frame: BHER Program Partners.....	176
Figure 17 Film Frame: Total Learner Online Messages in 2016 Course	177
Figure 18 Film Frame: Learner Online Post Messages in 2016 Course	178
Figure 19 Film Frame: Learner Online Post and Reply Messages in 2016 Course.....	179
Figure 20 Film Frame: A Pitch to Improve Engagement Online.....	180
Figure 21 Communication Structure of WhatsApp Broadcast	182
Figure 22 Communication Structure of Regular WhatsApp Group	183

Figure 23 Final Film Frame	186
Figure 24 Visual Analogy of Data	200
Figure 25 Visual Analogy of Data Isolated on Groups.....	201
Figure 26 Visual Analogy of Data – At Course Start	202
Figure 27 Poll One Results	203
Figure 28 Visual Analogy of Data – June 11	204
Figure 29 Poll Two Results.....	205
Figure 30 Visual Analogy of Data – June 12.....	206
Figure 31 Poll Three Results.....	207
Figure 32 Visual Analogy of Data – June 13	208
Figure 33 Poll Four Results	209
Figure 34 Visual Analogy of Data – June 14.....	210
Figure 35 Poll Five Results.....	211
Figure 36 Visual Analogy of Data – June 17.....	212
Figure 37 Poll Six Results.....	213
Figure 38 Visual Analogy of Data – June 20.....	214
Figure 39 Poll Seven Results	215
Figure 40 Visual Analogy of Data – June 22.....	216
Figure 41 Poll Eight Results	217
Figure 42 Visual Analogy of Data – June 25.....	218
Figure 43 Poll Nine Results	219
Figure 44 Visual Analogy of Data – June 28.....	220

Definition of Abbreviations

ACU	Australian Catholic University
CoI	Community of Inquiry framework
EDUC 3711	The undergraduate credit course at York University, Canada titled: Education 3711 Education and International Development
GMT	Greenwich Mean Time
HEIE	Higher education in emergencies
INEE	Inter-Agency Network for Education in Emergencies
MIM	Mobile Instant Messaging
TCPS-2	Tri-Council Policy Statement 2
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commission for Refugees

Definition of Terms

Blended learning: The delivery of a course via distance education and face-to-face modes.

Crisis: A state of affairs in which a decisive change for better or worse is imminent.

Distance education: Education where the learner and instructor are separated by time and space.

Durable solution: The situation in which an individual can live safely and rebuild ones own life.

Emergency: A situation where a community has been disrupted and has yet to return to stability.

Higher education: Formal tertiary trade or academic education at the college or university level.

Learner: A person who has enrolled in a course for the purpose of learning.

Participant: A learner who has consented to be a subject of a research study.

Persons of concern: People who have been forced to flee their homes due to war, civil strife or other violence threatening their safety or freedom. The term was used here to include refugees, internally displaced people, asylum seekers, stateless persons, and returnees.

Resettled refugees: Refugees who have moved away from an emergency to a location of more durable solution.

Social presence: The degree to which one projects oneself socially as a real person, as measured by indicators for fostering open and affective communication and contributing to group cohesion.

Chapter 1. Introduction and Theoretical Framework

Introduction

Distance education is regularly compared to face-to-face education, with research asking whether the two modes are equally effective and most often resulting in a conclusion of no significant difference (Russell, 1999). Decades ago Moore (1994) affirmed, “The effectiveness of distance education has been proven” (p. 1). Meta-analysis studies conducted in the ensuing years provide cogent arguments supporting the value of distance education (Bernard et al., 2004; Means et al., 2010; Nguyen, 2015; Y. Zhao et al., 2005). Given the outcomes of distance education are comparable to in-person learning, then an important question arises asking, “When is distance education preferable over face-to-face instruction?” Individual learners answer this question by taking into consideration their unique personal, familial, and geographic contexts. One answer is when the learner is in a place or time of transition, thus unable to make a sustained commitment to an educational program limited to a synchronous class schedule and rooted in one geographic locale. One such context is when learners are forcibly displaced from their homes as a result of persecution, conflict, violence, or human rights violations. These learners may be refugees, internally displaced people, asylum seekers, stateless persons, or returnees and can be collectively referred to as *persons of concern* (UNHCR, 2017c). This action research study investigates one international multi-site blended learning course in which some of the learners are persons of concern.

The course used in this study was called *Education and International Development* (EDUC 3711). It was an undergraduate credit course offered through York University, in conjunction with the *Borderless Higher Education for Refugees* (BHER)

program. The EDUC 3711 course was offered in the condensed summer term of June 2018. The course used a blended learning format, in which the curriculum was delivered both in-person and online. The learners attended separate in-person classes based on their locale in Canada, Kenya, or Thailand. Learners who resided in the Greater Toronto Area attended in-person classes at the York University campus. Camp-based learners who resided in Dadaab Refugee Complex, Kenya attended in-person classes at a learning centre located between camps. Non-camp-based learners who were refugees from Myanmar living in Thailand attended residential learning centers outside of the refugee camps. The online component of EDUC 3711 was a collaborative digital learning space shared by learners in all three countries. All learners were assessed by the academic standards of York University and received a final grade for this undergraduate credit course.

The EDUC 3711 course was designed based on social constructivist theory where knowledge is constructed from a continuing social situation in which two or more individuals interact (P. L. Berger & Luckmann, 1967, p. 75). The learners from the multiple international sites were brought together in their online learning environment that used a learning management system called *Moodle* primarily for content delivery over the Internet. Based on their locale, learners experienced considerable disparity in access to the Moodle site. This was identified as the problem upon which this action research is built.

Action research aims to understand a practice for the purpose of improving it and is comprised of the tasks of acting, observing, and reflecting on the practice (Kuhne & Quigley, 1997, p. 24). The differing approaches to the order and execution of these tasks

are discussed in *Chapter Two*. This study follows the order of “finding the problem, finding a solution, and testing the solution” (A. P. Johnson, 2002, p. 21). Testing a solution is the deployment of an interventionary action (Schmuck & Stevenson, 2010, p. 23). The interventionary action for this study was to deploy the use of the mobile instant messaging (MIM) application called *WhatsApp* for course related online discussions. The primary researcher proposed this solution to the course professor based on personal awareness of the widespread use of WhatsApp by persons of concern. Some action researchers embrace a messy, trial-and-error hunch as a starting point for action research (Corey, 1953; A. P. Johnson, 2002; Kuhne & Quigley, 1997; J. McNiff & Whitehead, 2011).

Sometimes you have a hunch and you ask, ‘I wonder what would happen if...?’ Perhaps something could improve, and you may want to try out a new style or strategy. This means evaluating what happens. Is it working? Should you change something? This involves asking, ‘How do I understand what I am doing?’ ‘How do I improve it?’ and generating evidence to support any claim that you have improved the practice by studying it systematically. (J. McNiff & Whitehead, 2011, p. 56)

The remaining steps of this action research study are to observe and reflect on this interventional action. This is done using both qualitative and quantitative methodologies, which are introduced later in this chapter and detailed in *Chapter Three*.

Background and Statement of Problem

The United Nations High Commission for Refugees (UNHCR) is the primary international organization overseeing the provision of education to persons of concern.

Education for persons of concern is primarily focused on the K-9 level, in keeping with the *Universal Declaration of Human Rights* that advocates for the free and compulsory access to elementary and fundamental stages of schooling, with higher education relegated to being available and accessible on the basis of merit (United Nations General Assembly, 1948, Article 26, Section 1). Given the global population of persons of concern at the end of 2017 was estimated at 71.44 million (UNHCR, 2018e), it is reasonable to assume that there are a large number of persons of concern who have the capacity and desire to pursue and succeed in tertiary level education.

They reside in a context of transition without knowing if they will return home, make their country of first asylum permanent, or resettle in a third locale. They also do not know if their transitional state will be short term or protracted. In 2013, the United Nations High Commissioner for Refugees reported a protracted displacement has “continued into the second and third decades for some Somalis, Rwandans, Burundians, Liberians, Eritreans and Congolese exiles” (United Nations General Assembly, 2014, p. 2). Persons of concern occupy a liminal place, as defined by uncertain time and space. Their educational potentials are marginalized by both the liminal conditions of their displacement and the lack of access to face-to-face synchronous institutions of higher education. However, the constraints of their liminal predicament are well matched to the strengths of distance education models that break free of the time and space confines of face-to-face education. In 2018, the United Nations General Assembly confirmed its support of online tertiary education for refugees (p. 13).

The York University course, *Education and International Development*, used in this study was comprised of (a) learners who were persons of concern (living in one of

four locations: Daadab or Kakuma in Kenya; or Mae Sot or Ranong in Thailand) and (b) learners who were not persons of concern (living in Toronto, Canada). The course curriculum explored the transformative and disruptive power of learning to impact social, political, economic, and environmental change within the context of international development (Dippo, 2018). This was considered through various perspectives of “gender, race, ethnicity, class, sexuality, ability/disability, and structures of privilege in knowing and learning” (Dippo, 2018, objective 4). The demographic range of the learners enrolled in this course reflected a diversity of perspectives. The expression of course-related personal perspectives held by learners from the geopolitically diverse locales was important to the curriculum taught; therefore, the course was designed to optimize the opportunities for the learner-to-learner communication. This study focuses on those learner-to-learner communications.

Delivering blended learning across geopolitically diverse multiple locales is aligned with some of York University’s mission to explore global concerns, value diversity, and promote social justice (York University, 2021b). As a partner in World University Services Canada (WUSC), York University shares the goal of changing the world through education (World University Services Canada, 2017). International multi-site blended learning courses can be viewed as extremely cost effective, safe, and environmentally sound cultural exchange programs. Contemporary information and communications technologies (ICTs) foster an abundance of approaches to internationalization that are not dependent upon the physical mobility of university learners or faculty members to cross international borders, (Alvis, 2016; Bruhn, 2017; Caniglia et al., 2018; Doscher & Landorf, 2018; Villar-Onrubia & Rajpal, 2016).

Researchers emphasize the value of experiencing first-hand authentic knowledge of others that until recently was only available to privileged few who could afford to travel (Pimmer & Groehbriel, 2013; Rubin, 2017; Y. Wang et al., 2016). EDUC 3711 was an internationalized course because of its content being focusing on contemporary global concerns of education and its delivery being to learners living in three countries.

The learners experienced completing group assignments with classmates at a distance through mediated forms of communication, which Ahonen and Kinnunen (2015) researched as important contemporary workplace practices to integrate into education. The unique cultural experience of a multi-site international course involving learners who are persons of concern and those who are not, contributed to the global experience and skills of learners in these courses. This is important when considering education for persons of concern, because those providing the education require the learners' education to be relevant not necessarily the country of first asylum, but to the country in which a durable solution is found. Since 2013, York University has been delivering international multi-site blended learning courses.

These courses are delivered using the learning management system (LMS) called *Moodle*. The details of the software applications used in this study are discussed in terms of the educational affordances to the learners in this course. It is important to understand that learner access to Moodle was via the Internet. This was a significant concern because some of the learners who were persons of concern had limited access to the Internet, such as the refugee camp-based learners in Kenya who accessed the Internet only once a week when they were able to visit the camp-based learning centre. For a compressed course delivered over four weeks, this was a significant hindrance. As a

result, the EDUC 3711 York University courses offered prior to 2017 saw little activity in the Moodle discussion forums and no collaboration on group assignments between Canada-based learners and the learners who were persons of concern (MacIsaac, 2017a; MacIsaac & Doyle, 2017).

In the June 2017 iteration of this course, WhatsApp was introduced into the course design. Garrison and Akyol (2013) caution the overzealous adoption of new technologies to educational use by positing that it is “innovative only when it improves the effectiveness of an educational experience” (2013, p. 112). WhatsApp was chosen to address a weakness of the existing technology used in this course (i.e. LMS via the Internet) for this population of learners, and because WhatsApp was the most widely used freely available mobile chat application in the world with a significant market penetration across all developmental strata of economies globally. Notably, it is widely used by persons of concern (Alencar, 2018; “Migrants With Mobiles,” 2017; Tkach & Williams, 2018). The successful use of WhatsApp for online course discussions in the 2017 version of this course, along with other additions made to the online course design to encourage the collaboration of learners across multiple sites (MacIsaac, 2017a, 2017b; MacIsaac & Doyle, 2017) highlights the need for research being explored by in this study.

The combined changes to the course design for EDUC 3711 were focused on increasing the opportunity for social interaction, such as learners’ phatic sharing and getting to know each other, in the hopes of building trust and group identity, and eventually leading to co-creating an online space for collaborating internationally (MacIsaac & Doyle, 2017). While research disagrees on the manner that social presence

impacts learning, it is agreed that it is essential. Wegerif (1998) synthesized the results from a study of online learners at the Open University as demonstrating that “success or failure on the course depended upon the extent to which the students were able to cross a threshold from feeling like outsiders to feeling like insiders” (p. 34). This study looks at this threshold experience in terms of the learners’ demonstration of social presence and overall success in the course.

For this study, a working definition of social presence is crafted from the categories of the social presence within the Community of Inquiry (CoI) framework (Garrison, T. Anderson, & Archer, 2000). This approach is taken as the published definitions have changed slightly for researchers working with social presence within CoI, yet the three categories, and their indicators have remained relatively stable since 2001. The details of this are discussed in *Chapter Two*. In general, social presence in this study denotes the degree to which one projects oneself socially as a real person, through online course communications, as measured by indicators for fostering open and affective communication and contributing to group cohesion (Garrison, T. Anderson, & Archer, 2000; Rourke et al., 1999). In situating their research within the CoI Framework, Joksimovic et al. (2015) describe, “The most important purpose of social presence – that supports higher order thinking – is in creating a healthy support that provides a comfortable place for students to exchange ideas freely, explore different perspectives and solve problems collectively” (p. 640). This is aligned with the course design and the course content of EDUC 3711, thus making it an appropriate approach for this study.

Purpose

The purpose of this action research is to improve the practice of educators and researchers. This is done through implementing, observing, and reflecting on one interventionary action. The qualitative analysis draws from first-person reflections of the primary researcher. The quantitative analysis explores the demonstrations of social presence in the online course communications and their relationship to academic performance.

There is relatively little research published on distance higher education for these marginalized populations of learners. *Chapter Two* elaborates on the prior research that investigates various related but separate facets of this research topic. None of the cited research combines all the issues that are brought together in this study. The literature review includes discussions on the current innovative, creative, and resourceful work of practitioners delivering higher education in emergency situations. For this study, emergency is defined as, “a situation where a community has been disrupted and has yet to return to stability” (Inter-Agency Network for Education in Emergencies, 2012, p. 117). An objective of this study is to inform the design of future international multi-site blended learning courses in which some learners are persons of concern.

This study produces three types of deliverables. One type is the statistical relationship between demonstrations of social presence and grade. Another is a descriptive account of conducting research into higher education in emergencies, the use of mobile instant messaging for educational purposes, and releasing the data openly. The final type of deliverable is the open release of the data. This contributes to a significant shift in academic research (Crosas, 2011).

Research Questions

Based on the purpose of this study the three research questions are:

1. What are the experiences of the researcher implementing mobile instant messaging (MIM) in an international multi-site blended learning course in which some learners are persons of concern?
2. What are the experiences of the researcher releasing the source data of this study openly?
3. What is the relationship between the demonstration of social presence in course-related mobile instant messages and the final grade for higher education learners in an international multi-site blended learning course in which some learners are persons of concern?

This study considers how the results of the third research question vary by the learners' gender, locale, or WhatsApp group. Together, these questions generate a cohesive account of this action research.

Limitations and Delimitations

The primary limitation in this mixed methods study is that neither the qualitative nor quantitative results are generalizable. Action research is always context specific and therefore cannot be generalized (Hinchey, 2008, p. 28; Kuhne & Quigley, 1997, p. 35; Quigley, 1997, p. 18; Stringer, 1999, p. xi; J. McNiff & Whitehead, 2011, p. 23). The quantitative results are not generalizable because the potential population of persons of concern with the capacity and desire to pursue higher education while displaced cannot be accurately estimated; therefore, a minimum sample size for generalization cannot be determined. Knowing from the outset that this study is not generalizable, this study is

designed with Polanyi's (1958) concept of "universal intent" to be useful to other researchers by contributing the findings to the critical discourse of related research fields.

A delimiter of this study pertains to the choice to limit the reflective data to the view of the primary researcher. The ethical and practical reasons for this are expounded in later chapters. While any view is subjective, a first-person reflection of the practitioner-researcher is a valid methodological choice within educational research (Quigley, 1997, p. 11-12).

Another delimiter is that data are from only one of many possible avenues of communication available to learners to interact with each other. The source data are the WhatsApp messages within assignment groups set up for the course. Missing are other technology mediated forms of communication and in-person social interactions. A final delimiter is that the literature review draws only from English publications because of the linguistic limitations of the primary researcher. This defines the scope of the investigation without negating the importance of pursuing this research.

Outcomes and Significance of Study

There are excellent initiatives using distance and blended learning to deliver higher education to international multi-site classes such as the Collaborative Online International Learning (2017). This study focuses on one course, from the *Borderless Higher Education for Refugees* (BHER) program, engaging learners who are persons of concern in Kenya or Thailand with learners from Canada. When the primary researcher of this study started researching in the area of higher education in emergencies there was little published on tertiary level distance or blended learning for persons of concern. In contrast there is a rich literature on tertiary level education for individuals who were

formerly persons of concern and have resettled to third countries, such as Canada, the United States of America, Australia, and the United Kingdom. There are logistical advantages to conducting academic research with such resettled populations, as participants are no longer in a liminal context. This study addresses the research challenges of studying an undergraduate course with refugee and non-refugee learners. Logistical and ethical considerations are difficult for this study, resulting in a close consideration of what is practical and achievable in this research design. This study draws from the depth of research on social presence, distance and blended learning, and the use of mobile instant messaging and then applies it to a higher education context in which some of the learners are persons of concern. Through examining the experiences of conducting this research and the statistical analysis of the relationship between the distance learners' social presence and final grade, this study contributes a unique understanding of an international multi-site blended learning course that includes learners who are persons of concern.

Chapter One Summary

Individuals forcibly displaced from their homes can be served well by distance education because they can start their education while in a place of transition and continue studying if they move to another location. Transitional populations of study participants are logistically difficult to research, which may be the reason there is a gap in the research investigating distance and blended learning offered to persons of concern (Burns & Lawrie, 2015; Woolis, 2017). Including persons of concern in international blended higher education classes, mirrors contemporary global workplace practices through intercultural exchange and accomplishing group work at a distance through

mediated forms of digital communications (Kumi-Yeboh et al., 2017, p. 6). The nature of those interactions fosters the social construction of knowledge. This action research focuses on increasing equitable access to online communications between refugee and non-refugee learners in one international multi-site blended learning course. The interventionary action was to implement WhatsApp mobile instant messaging within this undergraduate course. This is the first of the three steps to act, observe, and reflect. As part of the reflection phase, a statistical analysis is conducted on one aspect of those online communications between learners, the projection of social presence as measured by indicators for demonstrating personal affect, fostering open communication, and contributing to group cohesion. Exploring the researcher's experiences and the statistical examination of the MIM messages may inform the design of future international multi-site blended learning courses in which some of the learners are persons of concern.

Chapter 2. Review of the Literature

Introduction

This chapter reviews the literature of the major concepts upon which this inquiry was based and is presented in five sections. The first section draws from the literature on higher education in emergencies. The second section draws from adult distance education theories and applies them to the context of international blended learning courses in which some of the learners are persons of concern. The third section draws from the theories and practices associated with the measurements in this study, reflections of the researcher, social presence, and academic performance. The first three sections discuss concepts that have developed over decades and remain relatively stable over time. The last two sections encapsulate two practices as informed by current technologies with significantly shorter histories than those earlier in the chapter. Mobile instant messaging is raised in the fourth section, and open research in the fifth. The current research, theory, and practice in these five areas identify the need for this study and the framework in which to conduct it.

The literature cited in this chapter and elsewhere in this dissertation is drawn from a variety of types of publications. There are 347 cited works. Information from 142 peer-reviewed journal articles and 85 academic book publications form the theoretical framework of this dissertation. Twenty-one doctoral dissertations, two master's theses, and ten academic conference presentations add to the scholarly sources of information. Organizations such as governments, international organizations, and universities produced the 75 corporate publications such annual reports, commissioned studies, and statistics. Eight news sources provide the snapshot of the politics and popular

perceptions. The final four sources cited in this dissertation are in a miscellaneous category of practical publication types, such as a report published on the Education Resources Information Center (ERIC) database. Based on the breath of the topic and its place in contemporary zeitgeist, the inclusion of academic, government, corporate, journalistic, and practical publications is appropriate.

Higher Education in Emergencies

Global Context of Persons of Concern

The United Nations High Commission for Refugees (UNHCR) serves persons of concern who are forcibly displaced people including refugees, internally displaced people, asylum seekers, stateless persons, and returnees. At the end of 2017, the UNHCR (2018e) estimated that 71.44 million people were persons of concern. This was more people than the populations of Thailand, France, Italy, or South Africa. By comparison Canada's population was estimated at 35.2 million that same year (Statistics Canada, 2017b). If all persons of concern populated one country, it would be ranked the 20th largest in the world, according to the world population data collected by the United Nations, Department of Economic and Social Affairs, Population Division (2017). This imaginary comparative ranking of population has changed significantly over the preceding two decades. In the years 2000, 2005, 2010, 2015, the total population of all persons of concern would have ranked 48th, 32nd, 31st, and 22nd respectively. The increase in total global number of people forcibly displaced from their homes each year exceeds the growth of most national populations. Between 2007 and 2012 the average annual increase in total number of people of concern was 0.09%, between 2012 and 2017 the average increase was 9.5% per year (UNHCR, 2018c, p. 4). Because of this, the term

crisis is not used in this study, as the word denotes a short-term situation. The *Oxford English Dictionary Online* defines crisis as, “a state of affairs in which a decisive change for better or worse is imminent” (Oxford University Press, 2017). World history since the creation of the UNHCR in 1950 leads one to expect a continued growth in the total number of persons of concern worldwide.

While estimating from this population the number of potential tertiary level learners is near impossible, the above imaginary comparisons to the populations of Thailand, France, Italy, or South Africa can help envision the possible magnitude of opportunity and need for education at the tertiary level. Dryden-Peterson (2011) reports that persons of concern who have completed secondary schooling desire to attend university, and applications for tertiary level education scholarships are between 10 and 30 times the number of available scholarships (p. 6). These contribute to the report’s documentation of the severely limited opportunities for higher education for persons of concern. In 2013, “there were only three programs that enabled access to higher education degree programs from the Dadaab camps” (Dahya & Dryden-Peterson, 2017, p. 289). Listed here by the greatest number of learners served per year, they were the Borderless Higher Education for Refugees (BHER) providing blended learning for camp-based learners, World University Services Canada (WUSC) providing scholarships to study in Canada, and Albert Einstein German Academic Refugee Initiative (DAFI) providing scholarships to pursue higher education in the host country of asylum. Approximately 30% of these learners were female (p. 289). In 2016, the UNHCR compared tertiary participation rates globally and found 36% of young people of university age around the world were in tertiary education (this was up from 34% the

previous year), while only 1% of young refugees had overcome the significant barriers to attend higher education (UNHCR, 2017b, p. 19). In 2019, the UNHCR set a target to increase enrolment of refugees in higher education to 15% by 2030 (p. 13).

It is understandable that international humanitarian aid prioritizes the physical and security issues outlined by Maslow's (1943) hierarchy of needs, and addresses the need for food, water, health, safety, and shelter (Morlang & Stolte, 2008, p. 63; Moser-Mercer, 2014, p. 114). Education for persons of concern is prioritized at the kindergarten to grade nine (K-9) level (UNESCO, 2007), in keeping with the *Universal Declaration of Human Rights* that advocates for the free and compulsory access to elementary and fundamental stages of schooling, with higher education relegated to being available and accessible on the basis of merit (United Nations General Assembly, 1948, Article 26, Section 1). At the time of that declaration, the United Nations (UN) addressed refugee educational issues through the United Nations Educational, Scientific and Cultural Organization (UNESCO). In 1950, the UNHCR was formed as a temporary UN office with a three-year mandate to complete its work and then disband (UNHCR, 2015a). The UNHCR continued the work of the League of Nations' Commission for Refugees that was started June 27, 1921 (Schaufuss, 1939, p. 47).

Realizing that the need for the UNHCR office would continue past its initial temporary mandate, UNESCO and UNHCR signed five agreements outlining cooperation between the two while assigning financial responsibility of refugee education to UNHCR. The most recent agreement, signed on April 1, 2011, is *The Framework Agreement between The United Nations Educational, Scientific and Cultural Organization and The Office of the United Nations High Commissioner for Refugees*.

Given the total population of people forcibly displaced, the UNHCR recognizes the inevitable need to provide tertiary level education to this population. The UNHCR's *Educational Strategy 2012-2016* includes the need to "expand tertiary level open and distance learning for refugees" (UNHCR, 2012, Key Strategy 4.2). Building on the guidance provided in this strategic document, two years were spent developing the follow-up strategic document *Refugee Education 2030* (UNHCR, 2019). The *UNHCR's Strategic Directions 2017-2021* documents the aim "to design and develop scaled solutions, working towards a world in which refugees can access and manage their own digital identity, gain accredited online education, support their families, and communicate effectively through improved connectivity" (UNHCR, 2017d, p. 30). The United Nations General Assembly (2018) affirms the *Global Compact on Refugees* as a framework for international solutions for refugee situations globally, which identifies online education as an innovative method to meet the specific education needs of refugees (p. 13). A paradox for refugees is that "while time for study during protracted encampment is abundant, there are few opportunities and little financial means for youth to access learning opportunities" (Zeus, 2012, p. 301). Building upon the recognition that distance and online learning are important albeit not the highest priorities for persons of concern, this study seeks to contribute to the body of literature on tertiary level distance education for these populations.

The government of each country defines the laws and regulations governing its educational system (UNESCO, 2007). Since international organizations participate in providing education to persons of concern across international borders, the legal and ethical concerns are complex (Thomas, 1996; UNESCO, 2007). International

organizations have cooperatively developed voluntary international standards for planning, implementing, monitoring, and evaluating during humanitarian response (Sphere, 2018). The most widely used is the *Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response*. It links education to the immediate priorities of humanitarian intervention of communicating information about health and safety issues (p. 12). Addressing an educational gap in the *Sphere Handbook*, The Inter-Agency Network for Education in Emergencies worked with the Sphere association (Sphere Project, 2013) to develop the companion document titled, *INEE Minimum Standards for Education: Preparedness, Response, Recovery* (INEE, 2010). *The Framework Agreement between The United Nations Educational, Scientific and Cultural Organization and The Office of the United Nations High Commissioner for Refugees* describes the INEE standards as “the normative framework for all Education Sector work in emergencies” (2011, para. 7). This framework agreement establishes that the INEE standards guide the collaborative work of UNESCO and UNHCR in providing education in emergencies. Together UNESCO, UNHCR, and INEE advocate for the provision of quality learning opportunities for persons of concern in technical, vocational, and higher education for adult learners including via the delivery mode of distance education.

Persons of concern, having been forcibly displaced from their homes, may be in transitional states for short or protracted periods of time. The UNHCR reported at the end of 2016 two thirds of the persons of concern were displaced for more than five years, 4.1 million for more than 20 years, and 2 million for more than 30 years (UNHCR, 2017a, p. 22). Until they find a durable solution, a seemingly permanent residence, they occupy an ever-changing liminal place often defined by what it is not, rather than what it is

(Mazurana et al., 2013). Persons of concern occupy *fragile contexts* (Burns & Lawrie, 2015; Moser-Mercer, 2014), which the Organisation for Economic Co-operation and Development frames as unstable economic, environmental, political, security, and societal contexts (Gornitzka & da Silva, 2018, pp. 9-10).

For the Thailand-based learners neither their home country of Myanmar nor their host country Thailand were signatories to international protection of the rights of refugees, whereas Kenya, Somalia, and Canada are amongst the 147 states that do recognize these rights (UNHCR, 2015b). Following the Second World War, the rights of European refugees fleeing events of prior to January 1, 1951 were declared in the 1951 *Convention Relating to the Status of Refugees* (UNHCR, 2010, p. 2). This convention was then amended in 1967 by the *Protocol Relating to the Status of Refugees* to remove the geographic and temporal limitations (UNHCR, 2010, p. 2). Refugees living in the Dadaab Refugee Complex are prevented from gaining employment or education outside their camp (Abdi, 2016; Moser-Mercer, 2014). Refugees living in Thailand have no access to higher education within the Thai post-secondary system and if they acquire a K-12 education it is often through schools not affiliated with the Thai Ministry of Education (Cranitch & MacLaren, 2018, p. 268). The rights available to the learners in the EDUC3711 course varied widely based on their locale.

International Adult Distance and Blended Education

Education

The five words, education, adult, distance, blended, and international, are used to organize this section's discussion of the education theories relevant to this study. The first is education. Throughout history we see examples of propaganda, indoctrination,

and punishment euphemistically being called education, such as the re-education centres run by Vietnam's Ministry of Public Security after the end of the Vietnam War, which have continued for four decades (Socialist Republic of Vietnam, 2007). Paulo Freire (1968/1993) presents a Marxist class analysis of education as an imbalance of power and oppression that can never be neutral. International humanitarian aid can easily fall into the dehumanizing oppression of the colonizer over the colonized, where international organizations use education to proselytize their agenda. This form of dehumanization perpetuates negative assumptions about learners who are persons of concern. These assumptions are similar to the deficit thinking observed in classrooms (Yonemura, 1977). "Deficit thinking is the product of a distorted belief system that reinforces oppressive perspectives and treatment of minorities, but occurs in a seemingly subtle and insidious way through a longstanding historical process of indoctrination by dominant culture" (Rose, 2015, p. 4). Deficit thinking can lead to developing poor quality educational initiatives based on the assumption of a lack of capacity of persons of concern to pursue intellectually challenging tertiary education. The INEE (2010) international standards for education in emergencies encourage respect of human dignity to be the basis to develop high quality educational interventions including those at the tertiary level.

Studies of persons of concern show that education significantly improves skills (Abdi, 2016; Ahonen & Kinnunen, 2015), health (Baines, 2001, p. 36) and self-esteem (Jabbar, 2008). Two kinds of social capital, bonding within groups and between groups (Flora & Flora, 2013) can be fostered in education for persons of concern. This is a more broad application of social capital than that based on social network theory and its analysis of an actor's centrality of position within the network and the strengths of

relationships between actors (Lin et al., 2001). Some educational initiatives to encourage the cultural flourishing of indigenous language, art, music, and story telling in the face of oppression (Art for Refugees in Transition, 2015; Conquergood, 1988). Some educational initiatives encourage bonding between otherwise hostile groups as a means to work towards peace in conflict regions (Martin, 2018; Schechter, 2004).

There is a long-standing need to train teachers who are persons of concern to teach K-to-12 learners who are persons of concern (Burns & Lawrie, 2015; Dryden-Peterson, 2015; Mendenhall et al., 2017; Thomas, 1996; Wa-Mbaleka, 2013; Woolis, 2017). Access to higher education in the field of education for persons of concern is a significant focus of the programs offered through BHER programs (BHER, 2017). In 2018, a small cohort of BHER graduates in Dadaab Refugee Complex were enrolled in a masters degree program so that they may be able to teach undergraduate learners in the camp to become K-to-12 teachers eventually making the educational program self-sustaining for and by persons of concern (Chiose, 2018). In studying refugee graduates from the Thailand-Myanmar border, Zeus (2012) reports that being awarded an internationally recognized degree from an accredited tertiary education institution bestows on the refugees a once a lost sense of official personal identity (p. 305).

Adult Education

Learners are often discussed within the dichotomy of pedagogy and andragogy educational theories. While some discussions of these two theories place greater emphasis on the chronological age of the learner, coupling pedagogy with children and andragogy with adults, a deeper comparison of the two leads to a realization that andragogy as popularized by Malcolm Knowles (1984) can be used to support some

learner-centred approaches to children's education and the more teacher-centred approach of pedagogy can inform some adult education practices. Dron's (2007) work brings attention to the need to not limit course development to the limited binary of sage-on-the-stage versus guide-on-the-side, and instead offers a flexible alternative in which the learner is presented with the option to choose more or less control over the educational process. It is imperative to assess rather than assume the appropriate approach. Education developed for adult learners who are persons of concern can draw upon practices from both pedagogy and andragogy.

The five philosophies of adult education as adapted by Spurgeon and Moore (1997) present a continuum of theories that influence instructional design and practice. They are liberal arts, behavioural, progressive, humanistic, and radical (p. 13) and each have examples of educational initiatives currently offered to persons of concern. Many liberal arts adult learning initiatives that are relevant to higher education in emergencies are from Open Educational Resources (OER) as defined by UNESCO in 2002 (p.6). OER created from within communities of persons of concern can value traditional epistemologies and philosophies and counter the history of colonial education devaluing indigenous knowledge. The open movement spawned the development of massive open online courses (MOOCs), which can be divided into two types. One type, called cMOOC, is based on the development of networked communities of participating learners and is most closely aligned with the first MOOC called *Connectivism and Connective Knowledge* led by George Siemens and Stephen Downes in 2008 (Downes, 2008). The other type, xMOOC, is differentiated as more focused on the transmission of information (Downes, 2012). OER and MOOCs aptly fit the liberal arts adult education

theory where the learning is for its own sake, much like Houle's (1961) learning-oriented learner. This does not preclude the inclusion of OER or MOOCs into accredited educational programs, but are listed here because their essence is being openly accessible.

Working closely with UNESCO and UNHCR, the World Bank's involvement with the education of persons of concern aligns with the behavioral theory of adult education with its purpose to ensure compliance with economic and financial standards and societal expectations. The World Bank (2016) states, "good quality institutions, diversified options, relevant, equitable, and efficient tertiary education is key to ending extreme poverty and advancing economic growth" (para. 2). Houle (1961) identifies learners who adopt this approach as goal-oriented learners.

The Sphere association states the purpose of education in emergencies "can be both life-sustaining and life-saving. It can communicate messages about safety, life skills, and vital health and hygiene information" (Sphere Project, 2011, p. 12). These support the purpose of progressive adult education to support an individual's responsible participation in society. The independent and collaborative concepts within the humanistic adult education theories can serve to illustrate the need demonstrated by the building of online community social bonds between women in refugee camps of Afghanistan, Iran, and Iraq (Pierce, 2007), which fits into Houle's (1961) description of the activity-oriented learner.

Education of persons of concern can bring about fundamental social, cultural, political and economic changes in society, as is the purpose of education within radical adult education theory (Spurgeon & Moore, 1997, p.13). Morlang and Stolte (2008)

report that tertiary level education for persons of concern leads to higher average earnings and employment with greater leadership upon return to their home countries. “The benefits of tertiary refugee education transcend the individual student as they greatly benefit communities and nations emerging from conflict. The return of qualified human resources to a post-conflict area is a vital component for durable reconstruction” (p. 63). Women in refugee camps often gain health and human rights awareness that significantly increase empowerment in their lives and the lives of their children. Mr. Kofi Annan, the UN Secretary-General in 2006, remarks that education leading to the empowerment of women and girls is the single most effective policy “to raise economic productivity, reduce infant and maternal mortality, improve nutrition and promote health,” and increase the chances of education for the next generation (United Nations, 2006, para. 6). Gender is a consideration in the design of this doctoral investigation.

Maber (2016) provides a compelling description of education in emergencies being influenced by a *nomadic subjectivity* borne from the multiple tensions of local and international politics, conflict, economics, community, identity, and ethnicity. Best practices in the design of higher education courses for persons of concern are both reflective of their nomadic subjectivity and instruments of change for their communities. Even though Maber’s examples are drawn from the cluster of humanitarian organizations delivering blended learning to displaced persons along the Thai border with Myanmar, they resonate with much of the exceptional work done in the area of higher education in emergencies. Education initiatives in emergencies are seen as the hub of transformation (Nsamenange & Tchombe, 2011; UNESCO, 2016).

Ultimately, higher education in emergency initiatives need to be designed based on the appropriate assessment of the needs and capacities of the learners who are persons of concern. The social justice implications of removing barriers to higher education for this population of learners support the radical theory of adult education. This, together with the appropriateness of distance education to serve learners in liminal places, sustains the motivation to pursue this study.

Distance Education

Distance education may seem like an outdated phrase, with online learning or e-learning being more current. Distance education is used in this study because the concepts of distance learning predate the wide spread adoption of digital forms of communication and will apply in a future era of post-digital forms of communication. The definition of distance education is often distilled to the separation of learner and instructor by time and space. This is the congruency between distance education and learners who are persons of concern. Displaced people living in temporary locales for an indeterminate amount of time have difficulty making a commitment to a face-to-face educational program. Persons of concern can start their distance education in one locale and finish in another, with little interruption to their studies.

Discussions of distance education often include a technological deterministic view of the means to reduce what Moore (1991) refers to as transactional distance between learner and instructor that can lead to misunderstandings in communication. Of the 376 proposed initiatives, posted on OpenIDEO (2015) innovation website, to answer the question, “How might we improve education and expand learning opportunities for refugees around the world?” many started from the premise that a single given

technology would be the basis for a solution. These were based on the attributes of the technology rather than the needs of the potential refugee learners or telecommunication infrastructure available to them. In an interview with Latchem and Collins (2001), Sir John Daniel stated that in his work as Vice-Chancellor of The Open University of the UK (OU), “my first principle here is that you don’t experiment with live students. Given the scale at which the OU operates it is irresponsible to introduce new methods until you are sure that they are technologically robust and pedagogically superior” (p. 43).

Technological imperatives driving the need for change in education can lead to greater customization, interaction, and learner control (Collins & Halverson, 2009) which align with general guidelines of andragogy. These can be elements of success for marginalized learners who face multiple challenging roles in their personal lives (Orr, 2019).

Some educational humanitarian practitioners demonstrate an appropriate use of technology by developing initiatives that respond to the learning needs of persons of concern (Collins, 2015; Connected Learning in Crisis Consortium, 2019; Jesuit World Learning, 2019; MacIsaac, 2017b; Mendenhall et al., 2017; Moser-Mercer, 2014; World University Services Canada, 2013; Woolis, 2017). There is a strong history within distance education research to design a comprehensive framework for selecting technologies for educational use. One approach, proposed by Bates in 1995 and still in use is the ACTIONS model. In 2003, this was significantly modified to the SECTIONS Model (Bates & Poole, 2003) to be applicable to face-to-face and distance education modes. The acronym of this model has changed slightly since 2003, and currently stands for *Students*, *Ease* of use, *Cost*, *Teaching* functions, including pedagogical affordances of media, *Interaction*, *Organizational* issues, *Networking*, and *Security* and privacy

(Bates, 2015, p. 263). Distance education is well positioned to adapt to the current and future information and communication technology changes to serve the tertiary level education needs of persons of concern.

Chapter One opens with a brief acknowledgement to the validity and strength that distance education brings to the plethora of education opportunities provided worldwide. It also aligns with the long-term projection that the demand for higher education around the world exceeds the human and economic capacity to provide education through bricks and mortar (Bokova, 2011). The United Nations Educational, Scientific, Cultural Organization (UNESCO) predicts that the global demand for higher education would expand from less than 100 million learners in 2000 to over 250 million learners in 2025 (Bokova, 2011, p. 2). The literature review below highlights in more details some of the affordances that distance education brings to higher education in emergencies. It starts with the financial and environmental costs of education.

According to UNHCR, many more learners can be supported via blended learning (US\$300 annually per learner) than via scholarships to attend face-to-face institutions (US\$6,000 to US\$15,000 annually per learner) (O'Malley, 2016a). Blended learning offers a cost effective way to provide access to higher education in emergencies. The potential positive financial impact of distance education in fragile contexts is two-fold. One is reducing expense of acquiring an education. The other is increasing economic participation of the graduates (Morlang & Stolte, 2008).

Roy et al. (2008) conducted an environmental audit of full time and part time face-to-face courses as well as print and online distance courses. "The most striking finding is that distance learning reduces the energy and emissions involved in studying a

[higher education] course dramatically to only 13-15 per cent of those arising from an equivalent full-time, face-to-face campus-based course” (p. 126). Distance education curriculum for persons of concern can have a direct impact on improving stewardship of the environment through courses such as agriculture (Commonwealth of Learning, 2015; Dryden-Peterson, 2011).

Distance education depends heavily on the built infrastructures of transportation and telecommunication, first with postal delivery of print materials, then television and radio broadcasting, and increasingly with Internet and mobile communication. At the time of this study, all of these forms of communication are employed around the world to deliver educational opportunities to distance learners who are persons of concern.

Digitally mediated learner-centred options continue to grow (Woolis, 2017, p. 56). UNESCO (2012), acknowledging that mobile communications networks are built rapidly with significantly less built infrastructure than previous forms of ICT, describes the emergence of near-universal access to mobile technologies as having the “potential to open up new avenues for improving the quality of teaching, learning and education management” (p. 6). “Increasingly, the ubiquity of information and communication technologies, even in emergencies and refugee camp settings, allows for the design of diverse and innovative technology enhanced higher education opportunities” (Aristorenas et al., 2018, p. 132).

The built infrastructures of refugee camps are the result of compromises between various levels of governments and humanitarian organizations. Refugee camps are designed and constructed as temporary settlements, regardless of how protracted the conflict is. For some governments, it is imperative to pursue this illusion of

temporariness, as anything more sustainable for persons of concern is viewed as a hindrance to motivating refugees to seek a durable solution outside the camp. In 2014, an impasse was reached when educators were negotiating with the Kenyan government to develop a language interpretation course for learners in Dadaab Refugee Complex (Parr, 2014, para. 4). "The Kenyan government felt that if higher education was offered to refugees in the camp, the refugees would want to stay in the camp and not return to Somalia" (para. 4). Once the course was redesigned to be delivered wholly at a distance, the government green lit the program because the course was no longer physically restricted to the refugee camp. Because this online course would be available to refugees "regardless of whether they return home, resettle or remain in the camp, there was no danger that offering access to a web-based course in Dadaab would make any difference to their movement" (para. 6).

The UNESCO *Global Education Monitoring report 2016* identifies education as a broad reaching effective initiative for reducing poverty, fertility rates, and child mortality; and increasing sustainable practices, disaster preparedness, and constructive political participation (UNESCO, 2016, xiv-xvii). The UNHCR is committed to supporting delivery of education to persons of concern through open and distant models (UNHCR, 2012, p. 6). Examples in this section demonstrate the unique strengths of distance education to successfully address challenges particular to providing higher education in emergencies.

Blended Learning

Blended learning in this study refers to the delivery a course via distance education and face-to-face modes. There is a continuum of variations of how these two

modes can be utilized in one course. At one end of this continuum is an instructional design in which technology is used only to supplement a primarily face-to-face course. At the other end is a course designed with the majority of learning activities occurring at a distance and learners meet face-to-face only for work that cannot be done at a distance, such as hands-on practical lab work. Confusion abounds, as there are no agreed standards or definitions the variations of blending along the continuum (Bates, 2015, p. 33). Unfortunately, terms such as blended, flexible, flipped, or hybrid are used interchangeably in the literature (p. 310).

As the Kenya-based and Thailand-based learners progress through the BHER program, the instructional design of their courses shifts along the spectrum of blended learning. The first year has the learner primarily learning in face-to-face courses. In the subsequent years the percentage of learning done at a distance increases. For the learners based in Canada they could choose to enroll in EDUC 3711 anywhere along their undergraduate journey, which comprised mainly face-to-face courses. The learners in Canada attended a classroom on York University campus for a face-to-face class led by the professor. On a different day the learners, who were refugees living in Kenya or Thailand, attended a learning centre in their locale where the face-to-face classroom work was led by an on-site member of the teaching team. The course is designed with most of the learning activities to occur between synchronous meetings. For the remainder of this dissertation the term *blended learning* references the above described the delivery format of EDUC 3711.

The deployment of EDUC 3711 via blended learning is consistent with many practitioners of higher education in emergencies (O'Malley, 2016b). South New

Hampshire University and Kepler University deliver degree programs via blended learning to refugees in Rwanda with a goal to expand from the two pilot sites to twenty locations by 2022 (PR NewsWire, 2017). In 2014, the Australian Catholic University (ACU) was recognized by a *UNHCR Round Table Conference on Tertiary Education for Refugees* as an innovator in delivering blended education to refugee communities throughout the world (Cranitch, 2014). Jesuit Worldwide Learning (JWL) partners with universities to be a world leader in providing blended learning to persons of concern. As a partner for universities that want to provide higher education at the margins, JWL brings what it does best, providing face-to-face instruction to persons of concern around the world. Their extensive experience informs the understanding of how to deliver higher education in emergencies via blended learning. In 2015, ACU and JWL along with other leaders in blended higher education in emergencies, Kenyatta University, Kepler, Moi University, Southern New Hampshire University, York University, University of British Columbia, University of Geneva-InZone and UNHCR drafted a framework for what has now become the *Connected Learning in Crisis Consortium* (2019). The consortium uses the term “connected learning” to mean a mixture online and face-to-face modes of learning, what in this study is called blended learning and should not be confused with the discourse of connected learning environments which is more aligned with personal learning networks (Ito et al., 2013). Moser-Mercer argues that blended learning is best for teaching persons of concern because “there is both a social component as well as individual private component to learning. In the refugee context meaning is created through collaboration, discussion, and working together” (O’Malley, 2016a, para. 6).

International Education

This section addresses the concept of internationalization of higher education in emergencies. As stated earlier, it can be viewed as a cost effective, safe, and environmentally sound cultural exchange program. The topic of EDUC 3711 was education and international development. Over the years of delivering this course to persons of concern, previous learners' work and viewpoints on contemporary global concerns shape the continual development of the course. Abdi (2016) vividly describes the paradox of learners studying human rights and social justice while living in a refugee camp and attending the disturbing physical setting of the face-to-face learning centre being behind barbed wire, and patrolled by armed guards who search each learner upon arrival at the center. The BHER learners in Thailand have even fewer human rights, as they have no protection of rights as refugees (UNHCR, 2010; 2015b).

Why does internationalization for these learners matter? Moser-Mercer advocates for internationalization because refugees refine their "ideas and arguments not just with peers and fellow refugees... but also with students who are not necessarily in a refugee context but are taking the same course" (O'Malley, 2016a, para.7). Some Canada-based learners shared poignant reflections upon the completion of the EDUC 3711 in June 2017. One writes of the classmates based in a refugee camp in Daadab, Kenya:

I assumed that they would not be able to complete their share of the work due to language issues. However in working with them I realized that that was simply a stereotype I had. They were extremely engaged, in constant communication and did a lot of research and had beautiful responses to our case study project.

(MacIsaac & Doyle, 2017)

Another Canada-based learner reflects on the personal connections with international learners and the relevance to the curriculum of the course being the roles of education in international development, “Collaborating with refugee students was ... a refreshing concept. It was interesting to interact with them and engage in professional dialogue regarding common issues that exist internationally. It grounded me with a different perspective on education and international development” (MacIsaac & Doyle, 2017). A third learner writes of a shift in personal perspective, “Prior to this course I had not realized the capabilities of the refugees and the rights that they had. A big label that I grew up with involved refugees being placed in the category of the ‘needy’ ” (MacIsaac & Doyle, 2017). The opportunity for the Canada-based learners to communicate with persons of concern on an intimate scale such as one-to-one or in a small group for a class assignment provides the opportunity for learners to see persons of concern in terms of their capacities and intrinsic rights. Dewey (1916) writes, “Education consists primarily in transmission through communication. Communication is a process of sharing experience till it becomes a common possession. It modifies the disposition of both the parties who partake in it” (p. 9).

There are different phrases to refer to this type of international learning environment. Virtual internationalization of higher education concept is built upon both the learner population and the curriculum being transnational (Bruhn, 2017).

Collaborative online international learning (COIL) is a model where both sites have an instructor and a body of learners; it is a cultural learning exchange for the instructors as much as it is for the learners. There are discussions underway to form a COIL network within the International Council for Open and Distance Education (Rubin, 2017).

Another terminology is globally networked learning (GNL) which broadens the inclusion of the learning environment to be more informal and formed over various social media (Globally Networked Learning, 2017). Whatever the name used to denote this virtual educational cultural exchange, the underpinning goal is to provide meaningful experiential learning shared with peers in another cultural context. There is value to learners on all sides of those exchanges.

Measures

This section of the literature review provides the theoretical foundation for choosing what to measure in this study. *Chapter Three* presents the theories underpinning the methodology of how measures are used. The measures supporting the main research questions are the researcher's experiences, the learners' social presence and the learners' academic performance. These are discussed in the first three sub-sections. The final two sub-sections address the rationale for the measures of the sub-questions related to gender and locale of the learner.

Researcher Reflection

The three core processes in action research are action, observation, and reflection. Whose reflection and of what is determined by the context of the research problem being solved by the action research. The section below outlines how the measure of researcher reflection was chosen from the breadth of options within action research.

Researchers often introduce their work by defining their chosen methodology where there may be wide interpretation in their field. Action research is no different. Sometimes a researcher states an individual methodological research choice as the definition for that methodology. In surveying literature on action research it became

apparent that this confusion leads to inadequate and conflicting definitions of action research. “The action research family is wide and diverse, so inevitably different people say different things about what action research is and what it is for, and who can do it and how” (J. McNiff & Whitehead, 2011, p. 7). The primary researcher set out to read action research publications with the aim of identifying a cohesive set of considerations for designing a research study utilizing this methodology. From this, the primary researcher distilled five considerations of action research. The reading of literature was conducted until a saturation of data was achieved, meaning that additional studies did not add additional considerations as they each fit into one of the five. Since this research is not a systematic review, the entire citation list of individual publications consulted for this task is not documented in this dissertation. However, exemplary citations to publications that discuss the considerations are included.

Here are five distinct considerations in designing action research. The first pertains to the order of the action research steps: proactive sees action as the first step and reactive sees observation and data collection as the first step (Schmuck & Stevenson, 2010, p. 23-24). The second asks if role of the researcher is internal or external to the action (J. McNiff & Whitehead, 2011, p. 11). The third considers if the source of the reflective data is individual or collective (J. McNiff & Whitehead, 2011, p. 44). Fourth is the purpose of the research: practical or emancipatory (Quigley, 1997, p. 18). The final consideration is the media of the data: movement, sound, text, or visual (S. McNiff, 2008, p. 29). Following these five considerations, this research is proactive, internal, individual, practical, and uses numbers, text, and visual data.

The purpose warrants further discussion. Practical and emancipatory purposes both aim to understand and improve a practice. The difference between the two is that emancipatory purposed research seeks to redress imbalances of power, equity, or social justice that were formerly taken for granted (Hinchey, 2008, p. 43-44). If conceived as on a continuum between practical and emancipatory, then this study fell between the two. This study embodies some values of social justice as it applies to removing barriers to participation in higher education online course discussions by this population of learners but not enough to designate the purpose as emancipatory. Action research is described as a “methodology for real-world social change” (J. McNiff & Whitehead, 2011, p. 15). Kurt Lewin’s 1946 article titled, *Action Research and Minority Problems*, is considered the seminal work on action research (Adelman, 1993). Lewin’s (1946) article describes the trial and error work of developing the practice that would become known as “action research” and is published in a issue of *The Journal of Social Issues* which bore the theme “Action and Research: A challenge.” Lewin’s personal history as a Jewish refugee from Nazi Germany informs the link between action research and social justice (J. McNiff & Whitehead, 2011, p. 41).

McTaggart (1993) cautions that, “the commitment to personal engagement while important, may risk collapsing into individualism” (p. 31). The purpose of action research, to produce new understandings or information useful to others (Hinchey, 2008, p. 35), anchors the focus of the reflections on the experience of conducting the research and not on the researcher as the subject. First-person action research is not individualistic (Kemmis & Di Chiro, 1987, p.103; J. McNiff & Whitehead, 2011, p. 44). A. P. Johnson (2002) describes the researcher a lens through which a bit of reality can be observed

(p. 8). Polanyi (1958) positions personal knowledge as the basis for social action. While protecting the researcher from becoming the subject of the study, reflexivity in research can, at times, “trace the presence of the researcher onto the research context, marking their interference, participation, and desire” (de Freitas, 2008, p. 470).

Arts-based researchers grapple with the tension between the written text and the artistic expression; academic writing versus personal reflection; and using first-person or third-person references to self. This tension can manifest in a disjointed written presentation, in which the reader must decode how information is reported, such as using italics for the reflective pieces of writing. For the most part, this dissertation is written following the *Publication Manual of the American Psychological Association* (APA) guide of third person references and non-gendered pronouns unless warranted. This is one such moment. I find pleasure in wrangling disparate ideas into linear prose to build an argument based on facts. I disagree with Eisner’s (1991) position that first-person reflective research needs to be written only in the first-person and that a researcher’s choice to write in the third person portrays the researcher as a “disembodied abstraction who is depersonalized through linguistic conventions that hide [the researcher’s] signature” (p. 4). In the report of this research, I selectively use the first-person singular pronoun to differentiate portions as my reflective experience, observation, or interpretation, from the rest of the dissertation, which is written in the third-person.

I have engaged in first-person visual and written reflections throughout this research. Sometimes I need to visually resolve my ideas before I can write or act upon them. Rather than separating art creation from the academic writing, the arts-based

reflections inform the written prose of this dissertation as even and seamlessly as multicoloured threads woven into a complex patterned tapestry.

Social Presence

In 1957, Hodgkinson wrote that there are two closely related characteristics of the educational research landscape that are “particularly important in setting the stage for action research. These are the growth of the use of scientific method in solving educational problems, and the development of the interest in social interaction” (p. 138). This action research incorporates statistical analyses of social presence within this higher education course.

Two seminal works from the pre-digital era are the basis for research into social presence in digital environments. The first seminal work is by P. L. Berger and Luckman, titled *The Social Construction of Reality*. It was published in 1967, before the wide spread use of current information and communication technologies (ICTs) such as the Internet, cellular mobile devices, and their derivative social media applications. Berger and Luckman write, “human ‘knowledge’ is developed, transmitted and maintained in social situations” (p. 15). They write that face-to-face is the most important and therefore prototypical case for social interaction (p. 43). They describe the knowledge of technology in everyday life as “recipe knowledge” (p. 56) limited to pragmatic competence in routine performances. To Berger and Luckman, the importance of information technologies is to deliver content. Their seminal work favours spoken language as it was originally situated in face-to-face situations and describes the ability for detachment of language in its “capacity to communicate meanings that are not direct expressions of subjectivity ‘here and now’ ”(p. 52). They created a continuum of

typifications in which the more technologically mediated forms of human interaction are labeled as more anonymous types of communication because the actors are more “removed from the ‘here and now’ of the face-to-face situation” (p. 48).

P. L. Berger and Luckman do not reference their contemporary Marshall McLuhan’s work on how communication media affected society. McLuhan’s work focuses on the changes to society following significant technological advancements in communication, namely the 15th century invention of the Gutenberg printing press shifting from oral to written communication (McLuhan, 1962) and the invention electronic media, specifically radio and television increasing the immediacy of one-way communication (McLuhan, 1964). Both of these technological advancements are framed as increasing the experiential illusion of “being there” even when producer and consumer of information are separated by real time and space.

The second seminal work is by Short, Williams, and Christie published in 1976, titled *The Social Psychology of Telecommunications*. They hypothesize social presence as a construct of “the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships” (p. 65). This definition is built upon research exploring intimacy and immediacy of the human gaze in communication (Short et al., 1976, Chapter 4). They draw from Argyle and Dean’s (1965) research on intimacy in human conversation being an equilibrium balance between four measurements, eye contact, physical proximity, how personal a discussion topic was, and the amount of smiling (p. 293). Immediacy persists as a concept drawn through the work of several social presence researchers and warrants further explanation. Wiener and Mehrabian (1968) designate the term as the spatial or temporal expression of “the degree

of directness and intensity of interaction” between communicator and the object about which the communicator is communicating (p. 4-5). They follow this with an example comparing the immediacy of two phrases, “you and I decided” and “we decided” labeling the former as less immediate than the latter. The phrase “you and I” designated two entities, whereas “we” designated no separation. Detailed examples of intimacy and immediacy as ways to develop social presence are brought forward to the description of data indicators used in this study. In considering technological advances at that time and McLuhan’s work on the affect of media to alter the world, Short et al. (1976) posit that mediated forms of communication render low social presence because of their inability to convey facial expressions and non-verbal cues.

These two seminal works by P. L. Berger and Luckman (1967) and Short et al. (1976) were written in a time when the everyday experience of technology-mediated communication was clearly demarcated from intimate and immediate face-to-face communication. An example was how overseas telephone conversations in the sixties and seventies were stilted because of the delay in conveyance of the audio between the two people on the telephone line. Looking at distance education through the lens of these two seminal works on human interaction meant concluding that the measurable distance in space or time between learners and instructors would prohibit any substantial development of social presence.

The intervening decades have seen an evolution of information and communication technologies (ICT) allowing humans to progressively transcend those deterministic limitations of technology on their ability to develop social presence in mediated forms of communication. Walther (1992) describes humans as robustly

pursuing interpersonal functions (p. 80) and aptly predicts that the more users “process the social information exchanges” via ICT, the more the inherent impediments of any ICT would dissipate as users adapt their “verbal and textual cues in impression formation, interpersonal knowledge generation, and relations communications” to that particular ICT (p. 54). The carriers of communication such as hardware (desktop, mobile, and wearable devices) and software (open, closed, and user-coded applications) are more available at the time of this research study. The format and language used in the content of communications has changed significantly. Since 1982 keyboard-based emoticons have been used to convey non-verbal cues (Fox, 2002, p. 10).

Following the observable pattern of information and communication technologies transforming societies (McLuhan 1962, 1964), the evolution of ICT continues to increase the sense of “being there” for people using media to connect to each other at a distance (Biocca et al., 2001; Boyer, 2016; Ice et al., 2007; Vohra, 2016). The need to experience the salience of here and now in human interaction is satiable via technologically mediated forms that were not imagined by the seminal authors of social presence, P. L. Berger and Luckman in 1967 and Short et al. in 1976. We have the ability to send user-created audio and video, as well as, real time data on location and health indicators of the user. Users can produce content for one-to-one communication and one-to-many communications in closed and open forums. Digitally mediated human communications are so ubiquitous that some users do not perceive them as information and communication technologies, as Dahya and Dryden-Peterson (2017) reveal in their in study interviewing post-secondary refugee learners’ mobile use. Because of contemporary ICT, “presence and absence are no longer so strictly spatialized and

actualized as near and far, and thus no longer fit so perfectly (if they ever did) with inside and outside” (Shields, 2006, p. 235). The space traditionally occupied by distance education, technologically mediated human interaction, is crowded with the explosion of social media initiatives serving social, commercial, political, or educational purposes, where users have the opportunities to consume and produce both content and software. Because of this, curating one’s online personae is commonplace. In reporting on the impact of mobile phones on rural areas around the world, Bhavnani et al. (2008) consider “social cohesion could be one of the more important forms of intangible benefit” (p. 19).

By the late 1990s, Garrison, T. Anderson, and Archer were developing the Community of Inquiry (CoI) framework positing that three presences (cognitive, teaching, and social) are necessary for deep and meaningful learning in a community of learning. In 1999, they worked with Rourke to publish a review of one of the three elements, social presence (Rourke et al., 1999). In this article, they mark a turning point in the evolution of educational ICT technology with the use of computer-mediated conferencing (CMC). They write that it is able to “support high levels of responsive, intelligent interaction between and among faculty and students while simultaneously providing high levels of freedom of time and place to engage in this interactivity” (p. 51). CMC is able to foster the once missing quality of intimacy. The CoI definition of social presence and corresponding set of indicators (Garrison, T. Anderson, & Archer, 2000, 2010) builds upon the work of its predecessors and is applicable to human learning irrespective of the details of the technology used in the learning environment. Social presence as described by the CoI Framework has withstood academic critique and validation for three decades strengthening the assertion that social presence in an online

course can foster the opportunity for meaningful and worthwhile learning. For these reasons, the CoI description of social presence is used as the underpinning of this variable in this study.

There is consistency, for the most part, in the literature that all three CoI presences are necessary for deep and meaningful learning in the online learning environment (Garrison & Akyol, 2013). Research agrees in cautioning that the development of social presence alone is not enough for establishing an environment for meaningful learning (Garrison, T. Anderson, & Archer, 2010, p. 6; Joksimovic et al., 2015, p. 642). The research differs on understanding the interplay of the three elements, as well as their roles, and prominence within the Community of Inquiry Framework. Some see social presence as a mediating variable between teaching and cognitive presences (Garrison, Cleveland-Innes, & Fung, 2010, p. 32; Joksimovic et al., 2015). Wertz (2014) finds this only when social presence is analyzed with each of the other CoI presences individually. However, when Wertz analyzes all the presences simultaneously, social presence is not found to be a mediating variable.

Armellini and De Stefani (2016) conclude that the emergence of the digital age and personal digital literacies has evolved social presence to be conceptualized as a core component of both the teaching and cognitive constructs and the central element to higher-order thinking in the 21st century online learning and teaching (p. 1203). They propose remodeling the same three elements of the Community of Inquiry framework. Some researchers posit the inclusion of a fourth element to the framework, such as *autonomy presence* (Lam, 2015), *expertise presence* (Lui et al., 2007), and *instructor social presence* (Lowenthal, 2017). The two most deeply researched and debated

refinements of the CoI Framework are *learning presence* (Shea & Bidjerano, 2010, 2012; Van Schyndel, 2015), and *emotional presence* (Cleveland-Innes & P. Campbell, 2012; Rienties & Rivers, 2014; Stenbom, 2015). There are two consistencies in the various CoI modifications. One is that in any given proposed CoI structure all presences are necessary for deep and meaningful learning. The other is that the importance of social presence is not diminished by the inclusion or rejection of the various additional presences to the original three.

Each element in the Community of Inquiry framework is attributed with categories of measurable indicators. The social presence categories are *affective*, *interactive*, and *cohesive* (Rourke et al., 1999). The proposal of emotional presence as a fourth element is not to be confused with the use of the phrase “emotional presence” within this seminal work on CoI social presence, in which emotional presence was a term previously used to identify the category of indicators which has been renamed as *affective responses* (p. 56).

Many researchers who conduct a content analysis for the CoI social presence collect data at an aggregated level of total social presence or the three social presence categories, but not at the individual indicator level. Joksimov et al. (2015) in designing their study to analyze the relationship between CoI social presence and final grade chose to code online course discussion messages by the three categories of CoI social presence. Their preliminary coding revealed that most messages in their dataset were being coded as demonstrating both interactive and cohesive communications which would “rather limit the discriminative power of those two categories; therefore, [they] decided to repeat the coding process at the level of indicators of social presence” (Joksimov et al., 2015,

p. 645). Their study has two notable findings relevant to this study. One is that learners with the highest amount of messages that are coded for the indicator *continuing a thread* achieve the highest final grades (p. 649). The other is that learners with the “highest frequency of the messages with the *complimenting, expressing appreciation* indicator attained the lowest final grades” (p. 649). Because there is no agreement amongst researchers on the relationship between learner’s success and social presence indicators, at either the individual or aggregated indicator level, there is an opportunity for this inquiry to contribute to this body of knowledge.

Academic Performance

Social presence is complex (Akyol & Garrison, 2008; Caspi & Blau, 2008; Swan & Shih, 2005). To understand the scope of possibilities for this study, the range of social presence research that already existed was considered. The following is presented as a demonstrative, not comprehensive, selection of the research conducted involving social presence. The intent of this study is to learn about the learners in this course, therefore, the study did not attempt to critique (see Annand, 2011; Xin, 2012), test, or validate (see Swan et al., 2008) the theories, definitions, instruments (see Arbaugh et al., 2008; Cobb, 2009) or models for understanding social presence. This study considers only one CoI presence; therefore, it cannot investigate the interrelatedness of CoI presences as some studies have (see Garrison, Cleveland-Innes, & Fung, 2010; Gasevic et al., 2015; Guitierrez-Santiuste, & Gallego-Arrufat, 2017). Some research frames social presence as the dependent variable in order to investigate the affects on it by independent variables such as technology (see P. Thompson et al., 2017; Turula, 2017), or learner demographics (see Mykota & Duncan, 2007; Mykota, 2015, 2017). Two demographic

characteristics of the participants, gender and locale, are considered in this study and discussed at length later in this section.

Often research considers social presence as the independent variable, and investigates its impact on one of more of the following:

- academic performance,
- creation of online communities,
- engagement,
- knowledge construction,
- learning networks,
- motivation,
- perceived learning,
- satisfaction,
- self-regulation, or
- retention.

Of the above alphabetical list of dependent variables, academic performance is interesting because the research investigating the impact of social presence on academic performance is mixed. Some researchers find no significant relationship (McPhaul-Moore, 2013; Paquette, 2009). Wise et al. (2004) investigate using a causal approach and find social presence to have no causal relationship with academic performance (p. 264). Hornik and Tupchiy (2006) find a weak positive association of social presence with academic performance (p. 47). Shelton et al. (2017) find that learners with the fewest demonstrations of social presence are “the most at risk of failure” (p. 63). Picciano’s (2002) study concludes that the relationship of social presence to academic performance

is inconsistent, after results show that social presence has no significant relationship to exam scores, but has a significant and positive relationship to performance on written assignments. Hostetter and Busch (2013) find similar results noting, “Students who demonstrated social presence in an online setting performed better on the [written] assignment” (p. 83).

Some studies find a positive correlation of social presence to perceived learning (Caspi & Blau, 2008; Hornik & Tupchiy, 2006; Yang et al., 2016). Two out of these three studies also explore the relationship between social presence and objective learning outcomes and find differing results. One, by Hornik and Tupchiy (2006) finds a weak positive correlation between social presence and declarative knowledge. The other, by Yang et al. (2016), finds a statistically significant and strong relationship between social presence and grades. Caspi and Blau (2008) encourage future studies to investigate the relationship between demonstration of social presence and actual academic performance (p. 342). Liu et al. (2009) find that higher demonstrations of social presence scores positively correlate to “probabilities of getting better course final grades” (p 171). Richardson et al. (2017) in conducting a meta-analysis of social presence and learner outcomes across contexts, disciplinary areas and varying measures of social presence (p. 403) find “only a few studies have examined social presence in relation to traditional academic performance, or grades” (p. 406). Richardson et al. (2017) also note that the most common measure of social presence investigates the perception of social presence, rather than the demonstration of it.

After choosing to investigate academic performance, the next decision considers how to measure it. Setting aside the earlier discussion on the various educational

theories, the purpose at the core of human education is the concept that someone learned something. Therefore, academic performance could be measured by whether someone did or did not learn something. The benchmark for the “something” could be set by the learner or the instructor. Surveying or interviewing learners about their perceived learning or whether their experience in the course met their personal goals are important approaches to researching social presence and academic performance. However, considering the previously described restrictions in studying persons of concern, only measures that could be identified within artefacts produced from the learners’ regular activities in the course are considered. The final grade is a practical choice given the restricted access to study participants. This is one of the three reasons supporting the choice to use final course grade as the measure of academic performance.

The second reason is more generalized. If a person enrolls in a university credit undergraduate course, then the person has a goal to achieve credit for the course. For the learners who are persons of concern, failing EDUC 3711 means being removed from the BHER degree program. For the Canada-based learners failing EDUC 3711 means paying for a course and not getting a credit for it. The learners in EDUC3711 had varying motivations to succeed by achieving a final grade in the course. The means to do so was to meet the assessment criteria of all the graded learning activities designed by the instructor. The final grade is an appropriate data point as it aggregates the assessment of all the formal learning activities in the course.

The last reason supporting the use of the final grade as a measure in this study pertains to the details of the EDUC 3711 course design. Social presence is measured by performing a content analysis of learners’ WhatsApp chat messages. These were outside

the influence of the professor, who was not in any of the WhatsApp groups. The grading rubric for the course does not include participation in the WhatsApp group discussions. This is contrary to prevailing practice that online discussions need to be graded otherwise participation levels will be low (Hura, 2010; Rovai, 2003; Solan, & Linardopoulos, 2011; Stemwedel, 2005; Woods and Bliss, 2016; Wyss et al., 2014; Zhang, 2011). These studies are aligned with T. Anderson's (2008) description, that "most online students are practical adults facing much competition for their time; thus, they are less likely to participate in activities that are marginalized or viewed as supplemental to the course goals and assessment schema" (p. 352). It is possible to present online discussions as a valuable activity without assigning a grade to it as an extrinsic motivator for the learners to participate. This aligns with common behaviour in Canadian University courses in which face-to-face attendance is not graded; yet its value is stressed. Other researchers reject using final grades to instead favour using the grade of a single assignment or exam to research the effect of social presence on academic performance because online participation is a component of the final grade and therefore not a pure measure to compare to social presence (Caspi & Blau, 2008; Rovai & Barnum, 2003). Statistically, the final grade for EDUC 3711 is not constrained by the WhatsApp chat messages, as they are discrete variables. Given the course design for EDUC 3711, the final grade is a valuable data point for this heterogeneous population, aligns with learners' intentions for enrolling in the course, and is discrete data from the WhatsApp discussions.

Learner Gender

In M. S. Knowles' (1970) model of andragogy, the second assumption is that adult learners "accumulate a growing reservoir of experience that becomes an increasing

resource for learning” (p. 45). The learners enrolled in EDUC3711 have varying life experiences that relate to the course curriculum on education and international development. As well, research shows that learner characteristics could influence the online learning experience. While some of these characteristics are skills related to managing the technical aspects of online learning, such as computer self-efficacy (Hayashi et al., 2004) or readiness for online learning (Smith et al., 2003), others are demographic characteristics of the learners, such as age and gender (Packham et al., 2004). Men and women formulate social capital differently in the context of education (Mebane et al., 2007; Webb, 2001; Wells et al., 2011). Gendered subjectivities are fluid, context specific, and intersect with human, social, and cultural capitals (Herring, 2003; Webb, 2001). Gender and locale are two variables measured in this study and are discussed below in turn.

It is beyond the scope of this study to fully explore all potential gender issues in the context of an international multi-site blended learning course in which some learners are persons of concern. This literature review highlights three areas of gender research that pertain to this study. First is research into gender and academic performance in distance education. Second is research into gender issues for persons of concern. Third are research findings about gender differences in social presence. Together, these form the theoretical foundation to include gender as a variable to analyze in this study.

Gender and Academic Performance in Distance Education

While gender is a measure often used in distance education research, it is difficult to identify consistent emerging themes. Conrad and Openo (2018) identify a lack of definitive research in this area (p. 34). Drawing from meta-analysis and systematic

review studies on gender and distance education, research conclusions are divergent (see Cam et al., 2016; Jahng, 2012; Perkowski, 2012; Yaghmour, 2012). Perkowski (2012) posits, “a small, significant relationship between gender and academic performance and gender and self-efficacy, favoring females over males” (p. 276). Cam et al. (2016) report from their meta-analysis that there is “no significant effect of gender on the attitudes towards computer-assisted instruction” (p. 257). The published broad scoped meta-analyses and systematic reviews do not agree on a replicable description of relationship between gender and the forms of technologically mediated communication used in distance education. Therefore, the narrower scoped articles based on single empirical studies provide background for considering relevant issues in researching gender and academic performance in distance education. These studies are included in this literature review because they identify how one or more specific ICT affordances differ by gender of the distance learner.

From its inception of delivering courses via postal mail correspondence in the 1880s in Sweden and England, distance education has removed barriers of exclusion for educationally marginalized populations (Tracey & Richey, 2005). Notably, at that time since “education had been available primarily to males in higher levels of society,” distance education directly increased the ability of females from various levels of society to access education (p. 17). In 1995, Pitkow and Recker analyzed survey responses from over 4,000 users of the World Wide Web and reported that 90% of them were male. While acknowledging that males dominated online networks, Pitkow and Recker conclude the article wondering, “It will be interesting to see if and how these trends change as the Web gains in popularity” (p. 822). Whitley (1997) in conducting a meta-

analysis on gender differences in computer-related attitudes identifies the importance of scoring positive and negative attitudes towards computers separately in order to accurately capture the gender divide as “women score higher on negative beliefs than do men” (p. 13). Arbaugh (2000) summarizes prior research into gender differences in e-learning as showing female learners disadvantaged as wealthy males were the primary users of computer technologies and noted by 2000 that this gender bias lessens as socio-economic changes increase access to the general public (Arbaugh, 2000, p. 506).

Later research shows the heavy text-based limitations of computer mediated communication provides online anonymity for learners which in turn is deemed an affordance to female learners as they can transgress gender biased social norms to flourish in networked online learning communities (Li, 2005b). Li provides a concise overview of the history of research from 1990 to early 2000s on the gender and the role of anonymity in computer mediated communication. This particular advantage for female learners to curate an anonymous or gender neutral digital presence in an e-course has lessened as technologically mediated communication continues to develop more richly with multi-media. Arbaugh’s (2000) article summarizes research at the time as showing that when male and female learners equally owned computers the “gender differences in attitudes towards computers and self-efficacy in using computers were negligible” (p. 506). Applying Arbaugh’s finding to this study, mobile instant messaging was chosen to because male and female learners, in Canada, Kenya, and Thailand had equitable access to WhatsApp on personally own mobile devices.

“Studies vary with respect to the impact gender has on performance in online learning environments” (Murthy, 2015, pp. 97-98). R. D. Johnson’s (2011) study of

female and male e-learners uses three measures of learning outcome. Two are the perceived measures of satisfaction with the course and instrumentality being the degree to which the learner believes the course enhanced the learners' skills. One is the final grade for the course. R. D. Johnson's results indicate gender differences exist for all three measures, more so for the two perceived measures. Female learners "were more satisfied with the course and found it to be of greater value... [and] performed marginally better than men" in final grade (p.85).

Another study finds that for online learners with overall grade point averages (GPAs) in the lowest quartile, there is a "significant difference in scores received in an online course between male and female education majors, with male students scoring significantly lower in the online course" (Kupczynski et al., 2014, p. 10). Additionally, Kupczynski et al. find no difference in online course grades between male and female learners in the remaining quartiles. If the results were not parsed by GPA quartiles, then the grade differences by gender would have been diluted. It seems once researchers separate the learners from their nuanced contexts, the differences of gender may fall away. Perkowski (2012) encourages further research to be conducted into gender differences in academic performance for distance education learners.

The history of distance education is dotted with the ever-changing relationship between current information and communication technologies and gender constructs. While conclusions are divergent, researchers continue to encourage gender be studied in distance education and learner academic performance. As with any data, once collected it need be investigated to determine its fit for analysis. Neroni et al. (2018) removed the gender variable from their final statistical tests investigating academic performance for

adult distance learners (p. 200). For these reasons the gender of each participant was collected in this study and the data was tested to determine if gender would be included in the final analysis.

Gender and Persons of Concern

Both men and women who are persons of concern face the same political, religious, and ethnic persecution, abuses, and torture. Women are additionally targets of gender-based violence such as rape, honour killings, female genital mutilation, forced marriages, and forced prostitution (Women's Commission for Refugee Women and Children, 2001, p. 16). More broadly, women and men experience humanitarian emergencies differently (Fiddian-Qasmiyeh, 2010; Pittaway & Bartolomei, 2013; Sadki, 2017). Ahmed's (2003) study of refugee education and political activism reported, "in the refugee transition women experience the migration process differently than men" (Ahmed, 2003, p. 7). Broader research on gender and online learning reports how online communications and interactions can merely "mirror the power structure of the society" (Li, 2005a, p. 5). It was important to the primary researcher to be accurate in depicting the contexts for learners in EDUC 3711 who are persons of concern, while avoiding what researchers warn is a common research ideology that frames female refugees as overburdened passive victims and then denigrates and pathologizes their culture (Ngo and Hansen, 2013, p. 115; Nusair, 2013, p. 72). Ahmed (2003) in approaching research of refugee women in terms of their strength, agency, and motivations, describes how changes in gender relations "are sparked by the crisis situations, which not only increase women's work but the traditionally assigned gender roles for both sexes in the home

country become less rigid in the new country” (p. 8). This section highlights digital ICT initiatives that transcend these constraints.

Pierce (2007) documents the work of female bloggers living in refugee camps in Afghanistan, Iran, and Iraq. These women, whose physical mobility in the camps are restricted to their domestic spaces unless accompanied by a male relative, find ways to contribute to public political discourse through online communities. To do so they use pseudonyms for self-protection (p. 54), anonymity being a particular affordance of online communication. Pierce (2007) emphasizes the simplest of acts such as blog posting “representations of everyday life are forms of political activism” (p. 324). These female bloggers living in war zones use collaborative international digital spaces to subvert gender stereotypes and resist gendered power structures.

Dahya and Dryden-Peterson’s (2017) research echoes McLuhan’s by considering “the mutually shaping processes emergent between technology and social practices in the refugee context studied” (p. 286). They write:

In the case of Somali women in the Dadaab refugee camps, a socio-technical perspective and mapping of existing virtual social networks illuminate exceptions to what are otherwise highly restrictive realities with regard to women’s opportunities to pursue higher education; it also demonstrates how cultural norms and practices related to women’s access to higher education in refugee camps shift through the use of ICT and through their engagement with transnational and online social networks. (p. 286)

They document that using WhatsApp mobile instant messaging allows female refugees to continue virtual contact with their once in-person social network after relocation. “Social

networks are considered a defining characteristic of this community, as social networks, support, and communication have been historically important in Somali society” (p. 289). When mobile devices are in the hands of refugee women directly, they have more control and privacy to use the technology than they do in an Internet cafe or computer lab. Dahya and Dryden-Peterson (2017) find that “the naturally occurring social relationships that motivate mobile technology use, and personalized access of the tool, may mitigate some of these challenges for refugee women seeking information about pathways to higher education in camps” (pp. 295-296). Their research shows mobile social networks mediated by WhatsApp allow female learners in the refugee camp to maintain contact with former refugees who were studying in higher education in other locations. This is a significant influence on the path to higher education for female learners by (1) learning what it is like to study in higher education, and (2) transgressing the restrictions within the camps to access information, technology and educational mentorship. Nicol et al. (2018) also working in Dadaab Refuge complex, created informal dialogue circles via WhatsApp for learners in an education program with graduates of that same program who were at the time studying in higher education abroad.

On the Thailand-Myanmar border female refugees have capitalized on the marginalization of women to develop alternative educational initiatives that circumvent state authorities in Myanmar or Thailand (Maber, 2016, p. 374). “Women’s organisations were often viewed as apolitical... and consequently were able to garner space for social work particularly amongst the young and in the traditionally feminised spheres of education and training, with little acknowledgement or oversight” (p. 386). Maber investigates initiatives on both sides of the Thailand-Myanmar border. Those on the Thai

side have greater access to international information via the Internet and the means for sharing information locally. This community-based response to address the information for refugees in the border region is common (Jack, 2017). The training initiatives, delivered via peer-led instruction and community learning centres, encourage community and political engagement in the hopes of fostering social change (Maber, 2016, p. 375).

Buscher (2010) provides a succinct overview of the changes from 1990 to 2010 in the international humanitarian response to women who were persons of concern. Gender-based issues have moved from invisible to reportable by women, and are included in policies by humanitarian organizations. Buscher found that practice and prevention of gender-based marginalization and violence were still lacking. More recent reports document the impact of education for persons of concern as significantly improving gender equality and women's empowerment (UNESCO, 2016, p. i). Education is found to reduce fertility rates as a female having four more years in school has one fewer births and half a year reduction in the frequency of births for each additional year of education (p. xv). The UNHCR acknowledges gender-based barriers to education for refugees and sets refugee education targets that include gender parity in higher education by 2030 (2019, p. 13). The United Nations General Assembly (2018) acknowledges the affordances of online tertiary education to remove gender-based barriers to higher education by increasing access and safety for the learners (pp. 13-14).

Pittaway et al. (2010) reports on the token inclusion of female representatives from refugee camps committees working with the UNHCR. A female refugee from Sudan in Ethiopia states, "Yes. They made the men let us come to the committee, but they will not let us speak, and we do not have a vote" (p. 233). A female refugee from

Myanmar living in the Thai border region, reports on women not feeling safe to voice their views publicly even when serving as community representatives to UNHCR committee and states, “They just say what their husbands tell them to – otherwise there is trouble” (p. 233). Researchers reflect that it is both valuable to pursue even though it is difficult to accurately collect and explore the range of experiences held by women who are persons of concern (Jacobsen & Landau, 2003; Jok, 2013; Mazurana et al., 2013; Pittaway & Bartolomei, 2001). As Pierce (2007) notes in researching female refugee bloggers in war zones, virtual spaces can blur boundaries between public and private (p. 54).

Gender normative expectations impact women’s low representation in higher education (Dahya & Dryden-Peterson, 2017). Male dominated social expectations requires refugee women to spent considerable time daily managing domestic labour and childcare (Buck & Silver, 2012; Hyndman & Giles 2011). One BHER graduate in Dadaab, Kenya, describes studying in her home from 9 to 11pm, only after her domestic chores are finished (Chiose, 2018, A9). Systemically, this means that the time female learners have available to study is occupied by non-educational obligations not put upon male learners. This gives male learners more time to study and discuss educational issues with their male peers. In addition to the limitations of time, movement, and personal safety, female learners have few in-person role models of women pursuing higher education. At the secondary school level the teachers are often male, and social norms prevent significant contact such as a mentoring role with female learners (Dippo et al., 2013). The Dahya and Dryden-Peterson (2017) study interviewed female and male learners who had graduated from secondary school in Dadaab Refugee Complex and

were accepted to study in higher education through BHER, WUSC, or DAFI programs. One female respondent speaks of being asked by a male secondary school teacher to speak to his class because there were no female teachers at the time, and he understood the value to girls to have a female role model pursuing higher education (p. 293-294). Education delivered to refugees improves empowerment of marginalized groups; women's health, safety, and autonomy; and political participation levels of both genders (Abdi, 2016; Baines, 2001; Maber, 2016; Moser-Mercer, 2014; UNESCO, 2016).

Gender and Social Presence

The divergent views of gender issues within distance education as discussed earlier apply to this section as well. Conrad and Openo (2018) state:

Most adults value online community and the relationships that emerge from well-constructed and facilitated courses that permit and encourage social connection. Not all do, however. Again, learners choose the level of sociability that they wish to bring to the course. Interestingly, gender researchers often attempt to illustrate that women are more socially active online than are men. We are not aware of any reports that successfully establish that this is so. (p. 34)

This study is designed with the understanding that gender may or may not have a significant relationship to the demonstration of social presence by this given population. This section draws examples of social presence research in which gender is variable.

R. D. Johnson's 2011 study addresses a gap in the research focused on gender and e-learning, and investigates gender differences in communication, perceptions of social presence, and e-learning outcomes (p. 80). R. D. Johnson using the five item scale developed by Short et al. (1976) reports significant differences between the genders in

terms of perception of social presence and degrees of interaction in online course discussion forums. Some research observes gender differences in perceived social presence of online learners (Thayalan et al., 2012). Angelaki and Mavroidis (2013) use a self-reporting survey instrument to measure the importance to the learner of various social presence elements of which the authors do not provide the origin. It is not the elements of social presence described by Short et al. (1976), Tu's (2002) CMC Questionnaire, or the CoI Framework (Rourke et al., 1999). The female learners attribute greater importance to all elements of social presence than do the male learners (Angelaki & Mavroidis, 2013, p. 86). Richardson and Swan's (2003) study shows a significant correlation between gender and perception of social presence, with "women perceiving a higher degree of social presence than men in this sample" (p. 74).

Research investigating the demonstration of social presence provided some insight into this study design. H. Zhao et al.'s (2014) study of six online discussion groups in one course, found that all female groups demonstrated the greatest effort of all the groups to maintain peer discussion and establish a social collaborative environment as demonstrated by social presence within the CoI Framework (p. 816). Christen et al.'s (2015) study of online business learners finds female learners demonstrate more interactive and cohesive indicators of social presence than male learners (p. 41). Salloum (2011) finds no statistically significant difference between female and male learners for aggregated values of social presence (p. 103). M. Wang et al. (2003) also report no significant difference between the genders in terms of online interactions when the data was aggregated but find significant differences by gender when each coding category was analyzed separately (M. Wang et al., 2003, pp. 54-55). Female participants'

communications were more often coded as asking/answering questions, social interactions, and expressing opinion, and male participants' were more often providing unsolicited information (pp. 54-55).

Human communications and interactions “mirror the power structure of the society” (Li, 2005a, p.5). Gender is a component of those power structures and may have varying impacts on the learners of EDUC 3711. This study collected data on the gender of each participant, in the hopes that there would be sufficient data fit for analysis. As gender balance was not a factor in composing the assignment groups, there is variation of gender representation between the WhatsApp groups.

Learner Locale

This study focuses on the demonstration of social presence as the communication of one's self. This communication is influenced by multiple factors external to the online course being studied, including the personal and cultural backgrounds of the learners (Kumi-Yeboh et al., 2017; Vladimirschi, 2012). Geography influences culture. Crang's (1998) textbook *Cultural Geography* defines culture “as embedded in real-life situations, in temporally and spatially specific ways” (p. 1) and posits the influence of geography on culture through a myriad of facets: economic, natural and built environments, economic, political, and social. This section discusses the implications of geographic locale for the design of this study.

All the EDUC 3711 learners lived in multicultural contexts. York University is situated in the multi-cultural former city of York where more than half of the population has a first language that is not English or French (Statistics Canada, 2017a). Dadaab Refugee Complex, having grown from one camp in 1991 to four by 2011, continues to be

the largest in the world with a recorded a population of 234,346 registered refugees and asylum seekers (UNHCR, 2018b). The multi-religious, multi-lingual population is predominantly from Somalia (96.3%), and is the largest population of Somalis outside of Somalia (UNHCR, 2018a, 2018d). The Myanmar refugees living in the border area of Thailand are culturally heterogeneous comprising of Christians (51%), Buddhists (36%), Muslims (8%), and Animists (5%) (UNHCR, 2021). The learners based in Kenya or Thailand are living in cultures of displacement informed by their current and past geographies. Fully investigating the influence of the socio-cultural factors of geographic locale on social presence of these study participants is outside the scope of this study.

Instead this study considers if locale, or spatially shared form of displacement, is enough of a differentiating commonality to investigate its relationship to the main research questions of social presence and final grade for learners in EDUC 3711. UNHCR had a campaign called *The Other One Percent* referring to the rate of enrolment in higher education by persons of concern (2016a). “To reach university education level, a young refugee has to overcome significant barriers and only one in 100 makes it. By comparison, just over one-third of young people of university age around the world are in tertiary education” (para.1). In 2017, the participation rate of Canadian 20–24 year olds in higher education was 43% (Statistics Canada, 2018, chart c.2.1). The experiences of accessing higher education for the EDUC3711 learners based in Kenya or Thailand are significantly different from their classmates living in Canada.

Constructing identities when individuals are displaced requires navigating different cultures and at times privileging the discourses of the humanitarian institutions that may appear to be both neutral and independent (Ngo & Hansen, 2013). Anecdotally,

past BHER learners who were persons of concern have described an acceptance of how their names were changed by different bureaucracy needs, such as UNHCR Refugee identification, or York University student enrollment services. Once the learners have completed their undergraduate degree program with York, they were adamant about how their names were displayed on their degree parchments. This is raised here to wonder if there may have been an operationalization of the learners' cultures for managing the immediately challenging context of displacement that was contrary to those same learners' deeply held beliefs and cultural identity. Put another way, it was hoped that the EDUC 3711 course as designed was successful in connecting learners in a deep and meaningful manner to allow individual learners to feel comfortable to express personal characteristics in order to project themselves as real people within the online course communications, thus rendering data worth analyzing.

Locale is a variable that is identifiable for this study, and allows for three clearly demarcated groups, learners who are (1) not persons of concern, (2) persons of concern living outside their home country in a refugee camp, and (3) persons of concern living outside their home country not in a refugee camp. Respectively, these are study participants living in Canada, Kenya, or Thailand. Investigating if there is a relationship between locale and demonstration of social presence is a sub-question that remains independent of the constructs of the course design. Similar to the gender-based variable, this study collected data on the locale of each participant, in the hopes that there would be sufficient data fit for analysis, at the class level. Locale would not be considered as a variable at the group level as the groups were intentionally comprised of learners from each locale.

Mobile Instant Messaging

As stated earlier, it was a practical choice to use WhatsApp for the online course discussion in the June 2017 iteration of EDUC 3711 course. Introducing the use of this widely used mobile application solved the problem demonstrated in previous years, that there was little collaboration between learners in the different locales via the communication options within Internet-based learning management system Moodle (MacIsaac, 2017b). WhatsApp was used again in the deployment of EDUC 3711 in June 2018 and is the primary source of data for analyzing the learners' demonstration of social presence. Just because something solves a problem for a course, does not mean it warrants an academic study. The following section of the literature review highlights the uniqueness this study contributes to the knowledge in this research area.

Social Media

As the literature pertaining to mobile instant messaging uses the term *social media*, a working definition for its use within this study is provided. In the opening chapter of *Social media: A critical introduction* the term social media is deconstructed into the components of information, interaction, communication, media, and society, each being complex multilayered constructs (Fuchs, 2017). A synthesis of the discussion could be that media becomes social media when a person recognizes its affordances for human interaction. In this study, the use of the term social media is limited to direct references of literature in which other authors use the term, most likely to mean digital applications that enable users to create and share content.

Mobile Instant Messaging in Education

Two systematic reviews of the use of mobile instant messaging (MIM) in education start from the similar premises, that there is a lack of understanding of how MIM applications are used for teaching and learning (Pimmer & Rambe, 2018; Tang & Hew, 2017). Both reviews build upon the current dominance of MIM in the field of communication, and note that most studies in their reviews stress the logistical qualities as the highest impetus for adopting a MIM to an educational setting. At the time of conducting this study, WhatsApp is the global leader mobile instant messaging applications with 1.5 billion users worldwide (Statista, 2018). It is free, easy to use, and compatible with Android, BlackBerry, iPhone, Nokia, Window Phone, as well as, Mac and PC platforms (WhatsApp, 2017). Saint George (2017) explores the uses of mobile phones by persons of concern in Rome and finds that WhatsApp is often the first or second most used software for people to connect with family and friends while displaced. Anecdotally, it is understood that the Kenyan-based learners were already using WhatsApp on a regular basis for social purposes. Unfortunately, the published WhatsApp statistics do not include usage in Kenya, Somalia, Thailand, or Myanmar (Statista, 2017). A 2014 study of higher education in emergencies reports learners who are persons of concern and enrolled in a pilot online course in which learners primary access to the Internet was by mobile device, find it costly and recommend that “course providers use applications such as WhatsApp, a cross-platform mobile messaging application that allows for the exchange of messages without having to pay for SMS” (Moser-Mercer, 2014, p. 60). A 2013 study shows that a disproportionately high percentage of learners, 77.5% men and 77% women, enrolled in higher education in Dadaab owned mobile

phones with Internet capable features as compared to the general population of the Dadaab refugee complex, 13 % of men and 4% of women (Dahya & Dryden-Peterson, 2017, p. 289). “Second only to radio, much like in other parts of Africa, in Dadaab mobile phones are a key form of communication and means of accessing information for long-term refugee men and women” (p. 289). Online education and mobile technologies are rapidly growing in the developing world and among refugee communities and are an important part of access to education (pp. 285-289).

WhatsApp, like all MIM, lessens the time and space constraints of human communication. Tang and Hew (2017) note the use of phrases such as quasi-synchronous and semi-synchronous to encapsulate the affordance of time that MIM brings to the suite of communication options for education (p. 100). This lessens the barrier to immediacy felt in technologically mediated communications. MIM communication is almost immediate, whereas the Moodle course postings has a built-in default feature, if not disabled by the course designer or instructor, that delays posting to forums for thirty minutes. This allows individuals to have time to edit their posts before they are published to their classmates and instructor. Prior to using WhatsApp in EDUC 3711, some learners had access to online discussions only once a week, meaning replies to posts could be delayed by a week. In a four week condensed course this was not a viable option for developing and sustaining a lively online forum discussion. Delays in EDUC 3711 WhatsApp communications were at the learners’ discretion, shifting the control from the instructor to the learner.

Both systematic reviews note that an often-cited affordance of using MIM in education is that it gives the learner the time to think before responding. In general,

careful reflection is possible in moments of silence online for any asynchronous learning environment (Duran, 2017). Unfortunately, most of the studies in these two reviews do not compare MIM to other online communications technologies. Most of the studies used MIM as the only online application to an otherwise face-to-face course format; therefore, these studies lack the support for claiming this as a particular affordance of MIM.

WhatsApp is used in EDUC 3711, in addition to the Moodle course website, with the hope that it would facilitate an increase in learner interactions, as is documented in the research of Aburezeq and Ishtaiwa (2013) who find using WhatsApp increases interactions between learners by 71%, interactions with content by learners by 54%, and interactions between learners and instructors by 42% (pp. 171-172).

Both systematic reviews report that direct integration of MIM into formal education is difficult, citing mixed success and no emerging best practice. Tang and Hew (2017) note that many studies suggest failure to successfully deploy MIM in a course is due to a lack of agreement on message posting etiquette. Tang and Hew aggregate a list of rules of etiquette from the reviewed studies (pp. 99-100). The proposed rules address problems with posting outside “school hours,” without reading other’s comments, using informal rather than academic language, large complex graphic files not easily viewed on small screens, lengthy responses, and messages too informal between learners and instructors. These rules further illuminate the mismatch between the desired course activities and the MIM affordances. The problem with people commenting before listening to others comments is a universal communication problem that exists independent of the communication medium. Proposing a rule to combat the informal communication tone of learners with instructors is contrary to the strength of MIM to

breakdown formal barriers in order to foster working relationships. This informality strengthens the value of using MIM for educational communications, as it breaks down the barrier of lack of intimacy in technologically mediated communication where a strong social presence is desirable. Pimmer and Rambe (2018) note the perception that informal language is acceptable in MIM and enhances learners' willingness to use it for educational purposes (p. 15). Successful use of mobile instant messaging applications in educational settings derives from an instructional design built upon the strengths of the application used.

Since the learners in this study were studying in three time zones, (Thailand, Greenwich Mean Time (GMT) +7; Kenya, GMT +3; Toronto, Canada, GMT -5), there were no restrictions on times of day to post to the WhatsApp groups. Learners could choose to adjust the periods of the day to activate alert notification on the mobile device being used for the course, such as turning their mobile devices to a silent mode. The rules governing the use of WhatsApp in EDUC 3711 in 2018 are listed in the consent letter (see Appendix C). Notably, the learners were required to comply with the York University *Code of Student Rights & Responsibilities*, as it applied to online course communications (York University, 2021a). This code is aligned with the creation of a safe and encouraging space for individuals to learn. Contravening this code of conduct would have had serious consequences for that learner's continued academic career at York University.

Both systematic reviews highlight the affordances of MIM in education. Tang and Hew (2017) categorizes these as pedagogical, social, or technological. Pimmer and Rambe (2018) present them in terms of dialectic tensions. The two reviews acknowledge

that perceived ease of use aids the introduction of MIM into educational settings. Greater peer interaction is also common to both. These affordances contribute to the reasons for choosing to use MIM in EDUC 3711.

In making suggestions for future research, Tang and Hew (2017) identify that none of the studies they reviewed compare “the occurrences of social presence between MIM and other forms of computer-mediated communication, such as discussion forums” (p. 101). This study describes these comparisons broadly, without being able to conduct substantive analysis because the total Moodle discussion forums of past courses rendered a sample that was too small. Another area identified by Tang and Hew (2017) for future research is longitudinal studies. While the current study does not follow the same population of learners over different courses, it does descriptively reflect on the changes over three years of delivering this course with and without using WhatsApp and does have data from everyday of the course. This study connects these changes to the investigation of the relationship between social presence and the final grade for the course.

WhatsApp and Persons of Concern

There are many complex layers of “the gendered culture of technology literacy” that software such as WhatsApp may mitigate (Dahya & Dryden-Peterson, 2017, pp. 295-296) because of its various affordances listed previously in the gender sections of this chapter. The socio-technical exploration of these social networks exemplifies the McLuhan discussion on the interplay of society and the use of information and communication technologies from two viewpoints. One is that pre-existing face-to-face bonds within Somali society influenced the creation of these online social networks. The

other is that these online social networks influenced shifts in social norms by creating bonds between men and women in their educational pursuits, where physical exchanges are not culturally appropriate. This shift in social norms in turn provides new support for women to pursue higher education “The information accrued through these networks provided access to valuable and sometimes necessary information that set the foundation for pursuing higher education” (Dahya & Dryden-Peterson, 2017, p. 293). Using mobile phones in these ways changes “the social and educational landscape of higher education for [the] interview participants” (p. 296).

The Dahya and Dryden-Peterson (2017) study emphasizes the importance of mobile social networks to provide support and mentorship to the educational endeavors of learners who are persons of concern. Notably, it highlights the particular affordances of these networks to women in highly restrictive patriarchal societies. Building upon the success of the informal use of WhatsApp to support formal education, this study expands the use of WhatsApp within the formal instructional design of an undergraduate credit course.

As will be discussed in the methodology chapter, a common criticism of research conducted on persons of concern is that their voices are rarely fully heard (Celestina, 2018; Pittaway et al., 2010). The WhatsApp messages are data created by the participants unprompted by the researcher. In conflict areas, silence can become a form of control with the residual legacy of oppression informing participants’ desire to not speak up in a research study (Celestina, 2018). Flawed sampling can lead to the silencing of some voices. This study is well positioned to hear a wide range of voices from learners in this course.

None of the studies systematically reviewed by Pimmer and Rambe (2018) or Tang and Hew (2017) involved persons of concern, or learners in Canada, Somali, Thailand, or Myanmar or its former name Burma. The two systematic reviews each have one unique Kenyan-based study that the other review does not analyze. Neither of the Kenyan studies used MIM in formal education. This doctoral study contributes to the gap in literature on the use of mobile instant messaging in the geographic locales of the study. The limited research on the use of mobile information and communication technology to expand opportunities for education for persons of concern focuses on informal education. This study complements this research by investigating the use of a mobile instant messaging application within formal education.

Implications for Measuring Social Presence in MIM

Some researchers contest applying the CoI indicators of social presence to mobile instant messaging communication. Notably, a proposed model of mobile social presence is based on the premise that “social interaction with mobile technology is very different from Computer Mediated Communication” (Tu et al., 2012, p. 247). The authors’ argue there are limitations of software designed for desktop computer hardware and the resulting implications for educational use. In the six years since that article was published, the interoperability of mobile devices to connect to non-mobile specific online and networked communities, lessens the importance of this distinction. Additionally, the device specific distinctions are blurred with mobile hardware expanding considerably to mimic a greater range of desktop capabilities; more mobile friendly interfaces of desktop applications; and desktop applications adopting features from mobile applications, such as push notifications. The systematic reviews by Pimmer and Rambe (2018) and Tang

and Hew (2017) both give considerable discussion to the push technology of mobile instant messaging as an affordance because it makes the user aware of another user. This is a feature that users clearly desire. For example, after push technology was added to the upgraded WhatsApp 2.0 in August 2009, six months after launching the company, the user base increased to 250,000 (Olsen, 2014). Push technology is not unique to MIM applications, or even mobile devices, as a user could set up alerts with some desktop applications or to have desktop application alerts sent to the user's mobile device. At the time of the deployment of the 2017 and 2018 iterations of EDUC3711, WhatsApp had a desktop version. This allowed for ease and efficiency in managing several WhatsApp course discussion groups at once. These cross overs lessen the emphasis on the differences between the software and hardware of mobile and desktop computers.

In 2018, the significant difference globally was in the infrastructures that support the two forms of communication. Many areas of the world have access to the wireless mobile networks via cellular towers where access to the Internet through wired infrastructure never existed (Bhavnani et al, 2008, p. 7). The significant differences in the technologies discussed here are practical as they relate to the learners and their particular contexts.

Tu et al. (2012) ground their discussion of mobile social presence as being “second best” to the paramount physical social presence. As technology becomes more bionic, there may be a time when it is impossible to differentiate between in-person interactions and technologically mediated interaction. At the time of this study, technologically mediated communication has its affordances that remain unique and separate from face-to-face communication. Mobile social media has the capacity to

connect different socio-cultural spaces in order to facilitate or enhance learning and problem solving, in ways previously impossible (Pimmer & Pachler, 2013). Digital communication has realized the continuation of McLuhan's concept of a global village in which information has the potential to be communicated around the world instantaneously (McLuhan & Stern, 1967), which is not possible to create and sustain on the basis of face-to-face communication. This study unequivocally values technology mediated communication as being, at times, a preferable form of educational communication over face-to-face.

Tu et al. (2012) raise valuable considerations for instructional design to support mobile learning environments. Anticipating that information and communication technologies would continue to evolve due to the interplay of technology and society (McLuhan, 1964), using a model of social presence dependent on a current mode of technology (Tu et al., 2012) would have limited utility for this study. Using the CoI Framework means that this study can contribute to the plethora of studies that have used it in the past and those in the future which may use technologies that go beyond contemporary concepts of mobile technology. One of the strengths of the CoI Framework is that the examples of the social presence indicators are not prescriptive to any given technology, meaning the operationalization of the model is adaptive to various technologies.

In designing this study, consideration is given to the appropriateness of applying the measures of the CoI social presence to the WhatsApp chat messages in EDUC 3711. Two CoI social presence indicators ("Continuing a Thread" and "Quoting from another's message") are removed from the coding instrument for this study because they are

technically irrelevant to WhatsApp. The details are explained in the *Data Coding Instrument* section of *Chapter Three*. The remaining strengths of the CoI Framework are deemed a suitable choice for this study.

In Tang and Hew's (2017) systematic review of the use of MIM in education, six of the studies in their review explored social presence. Five of these used content analysis of WhatsApp chat messages and one used participant interviews (p. 98). These limitations are presented not as reasons to not study this, but as even more motivation to study it. Pimmer and Rambe's (2018) findings suggest that MIM applied in higher education settings could support a wide range of social interaction and collaborative learning designs as it balances the dialectic tension of immediacy versus delays; intimacy versus detachment; and task versus ludic orientation. These balances support the earlier discussion on social presence and the constructivist basis of EDUC 3711. While this study is not a study *about* the use of the MIM WhatsApp, this study's results and its open provision of data may contribute to others' research focused on MIM applications.

WhatsApp in EDUC3711

The use of closed WhatsApp chat messaging groups was offered to all learners in the June 2018 iteration of EDUC 3711, regardless of whether or not they chose to participate in this study. Because the learners were familiar with using WhatsApp socially, the introduction of this communication technology for an educational use provided an increase in interactivity between learners while not imposing an increase in cognitive load (Sweller, 2011) to learn the technology. It was an affordable and efficient mode of asynchronous communication. The technology allowed for the almost immediate communication if two or more learners were chatting at once, and the

familiarity with the technology removed some of the barriers to intimacy in online communications. Immediacy and intimacy underlie the concept of social presence. Transcripts from the WhatsApp chat messages are manageable to download and analyze. WhatsApp is appropriate logistically for both the learners and the principal researcher to use, and theoretically appropriate to the study of social presence.

Open Movement

There are three aspects of the open movement that affect this study. The three areas concern enrolment, publishing, and data. Because each of the three concepts has multiple facets the resulting choices for the research result in a continuum of openness rather than a clear binary choice of open or closed. The following discussion is a selection of key concepts affecting choices made in preparation of this study.

Open Enrolment

Enrollment prerequisites to attend first-year university are different around the world. Standards for attending a Kenyan University are different than universities outside Kenya. While non-Kenyan universities look at grades only, the Kenyan universities also look at the final secondary school exam score. Dahya and Dryden-Peterson (2017) document the challenges of Dadaab Refugee Complex learners pursuing higher education, “Of those who complete high school and sit for the national exam, very few perform well enough to apply for university and for the highly competitive university scholarships that make higher education a viable possibility” (p. 288). The course EDUC 3711 is offered through the Canadian university York, which does not consider the national exam mark in the evaluation of applications. This at a minimal level is more open than the Kenyan universities. Additionally, York University’s BHER program

offers more open enrollment for learners who are persons of concern. BHER provides an opportunity for learners who have not graduated from secondary school to enroll in a non-credit preparatory course for pursuing undergraduate schooling through blended and distance learning. The EDUC 3711 course, being part of a York undergraduate degree in education, has aspects of enrolment that are closed to meet the institution's requirements of registration and assessment. Following a similar approach of open enrolment for refugee learners, the Australian Catholic University, the partner university supporting the EDUC 3711 learners based in Thailand, created a one-year diploma program for refugee learners without formal education credentials. After successfully completing this qualifying year, the learners receive accredited documentation from an internationally recognized university, to use in applying to enroll in an undergraduate degree program (Cranitch & MacLaren, 2018, p. 268). In contrast, examples of full openness in enrolment of undergraduate courses are those offered through OERu (2018).

Open Publishing

An essential part of academic research is the dissemination of the findings. The open movement provides an increasing number of options for how to disseminate research. Openly publishing contributes positively to open scholarship and challenges the closed ownership of research knowledge. As a librarian, I believe that access to information is a vehicle for social justice. A deliverable from this study is to pursue open publishing of this study's findings.

Open Data

Researchers report a rise in low quality research on persons of concern (Jacobsen & Landau, 2003; Krause, 2017; Pittaway & Bartolomei, 2013; Pittaway et al., 2010).

Specifically, Jacobsen and Landau (2003) discuss the concerns about “the shortage of statistically analysable data” involving persons of concern (p. 188). Releasing the data of this study openly can positively contribute to the quality of research in this area. Openly releasing the data provides two significant advantages to research of persons of concern.

Firstly, the data are analyzed in support of this single study’s research questions. If research data are considered a resource, it seems wasteful to not allow secondary use by other researchers, to pursue new research questions. The circumstances of this study mean that the data set is not large enough to make generalizations about higher education in emergencies. By openly releasing the data, there is a possibility that the data can be combined with other data to be used in a large-scale study such that the results could be generalized. “Data that are scientifically and ethically collected create a powerful tool for policymakers” (Jacobsen & Landau, 2003, p. 201). This study will openly contribute data relevant to those researching and designing higher education opportunities for persons of concern.

The second advantage to openly releasing the data pertains to lessening the negative impacts on persons of concern being subjects of research. The participants consented to the future secondary use of the data as described in the informed consent letter (see Appendix C). The data will be released through Dataverse Network of the University of Alberta Libraries. The Dataverse Network is well established globally; the metadata is compliant to various standards (e.g. Dublin Core and MARC) thus increasing the interoperable discoverability of the content; and the interface is user friendly for researchers to upload content and to search or browse content (Crosas, 2011). Openly releasing the anonymized and de-identified data is a distinct contribution to academic

research about higher education in emergencies as open data increases the potential for more research to be conducted on this under-studied difficult-to-access population without adding any further burden on the participants.

Chapter Two Summary

The issues of distance education for adult learners who are persons of concern differ from those of mainstream adult learners because of their fragile context. This education takes place in a wide variety of situations and contexts all across the globe with no single educational solution meeting all the needs of learners who are persons of concern (Thomas, 1996). This study builds upon the research literature relevant to first-person arts-based action research, international blended adult formal education, social presence, and the use of mobile instant messaging and applies it to the context of learners who are persons of concern. This inquiry is important because the principal researcher has found nothing published on this unique use of mobile instant messaging (MIM) within formal education. This study presents an account of the experiences of the primary researcher deploying MIM in this course. This study contributes to the understanding of online communications of the participants who are Myanmar refugees in Thailand, Somali refugees in Kenya, and multi-cultural learners in Canada. By openly releasing the anonymized and de-identified data, this study may contribute to larger research projects in this area.

Chapter 3. Methodology

Theoretical Underpinnings

The theoretical underpinnings of the research methodology for this study are grounded in a unifying set of presumptions of ontology, epistemology, and axiology. Together, they comprise the research paradigm of this study within which the research questions are formed. Considerable attention is paid to the ontological, epistemological, and axiological implications of visual arts-based research. Outlined in the subsequent subsections are: the design of the research; the processes for data collection, coding, and analysis; and assumptions of limitation, delimitations, reliability, and validity. The conceptualization of the methodology employed in answering the research questions set out in this study is influenced by two kinds of prior success. One is the practical experience of the primary investigator in academic writing, using Excel and SPSS software packages, multi-media painting and drawing, and studying the mobile instant message communications of the EDUC 3711 course offered in 2017, one year prior to the course currently being studied. The other is the body of work by researchers working in the areas of first-person arts-based action research and by other researchers exploring the relationship between learner's social presence and academic performance. Among the critiques of research conducted of persons of concern, Jacobsen and Landau (2003) identify that research is weakened when key components of the research design and methodology are never revealed (p. 186). The details in this chapter are presented to establish transparency. This plan is appropriate for the research questions and manageable for the context.

Ontology, Epistemology, and Axiology

Ontology considers the nature of reality. Action research assumes that “there is no one answer. Knowledge is uncertain and ambiguous. A question may generate multiple answers” (J. McNiff & Whitehead, 2011, p. 32). Any answer borne from action research is tentative, leads to new research questions, and is open to modification (p. 32). Additionally, what is known at the conclusion of any action research is context specific and not statistically generalizable (Coghlan, 2013, p. 335; Tekin & Kotaman, 2013, p. 89). This action research aims to share what is known at the study’s conclusion with enough detail to inform future related practice or research.

This study uses written discourse, mathematical computations, and visual renderings to portray what is known. The first two are conventional in academic research; however, the third is unconventional (J. G. Knowles & Promislow, 2008, p. 514). For this reason, considerable elaboration on the ontological implication of visual arts-based research is presented in this chapter. John Berger’s 1972 seminal text, *Ways of Seeing*, posits that “the relationship between what we see and what we know is never settled” (p. 7). In spite of the early human development to see and visually recognize things (p. 7) the visual arts remain a “mystery which excludes” most people (p. 24). Where there are gaps in understanding visual information the human brain strives to make sense of it. This is like how we experience films or flipbooks through the persistence of vision in which the human brain creates what is missing in between the flashes of static images in order to make sense and perceive movement.

Gitlin and A. Thompson (1995/2005) caution against viewing action research as a “methodological panacea” (p. 98). Some descriptions of arts-based research lean towards

it as such a panacea, stating that it is “holistic” (Bagnoli, 2009, p. 566; Weber, 2008, p. 44); is “humbler and more nuanced knowledge” (Weber, 2008, p. 46); “communicates across cultures reaching out to those who do not share a common language” (R. L. Lawrence, 2015, p. 142), and conveys “what is not literally there” and the artist’s feelings and perspective (Eisner, 2008, p. 11; Weber, 2008, p. 45) in order for the observer to “participate vicariously in a situation” depicted in the artwork (Eisner, 2008, p. 8) or “borrow the [artist’s] experience for a moment” (Weber, 2008, p. 45). Like a successful illusionist using the human tendency to make sense of an optical illusion, each of the above listed panacea are examples of stretching the ontological scope of knowledge created from arts-based research.

Instead, this study builds upon the perspective that visual images “can make us pay attention to things in new ways” (Weber, 2008, p. 44). “Arts-based research is meant to enhance perspectives pertaining to human activities” (Barone & Eisner, 1997, p. 95). As such, the visual images of this study are considered as primarily conveying connotative meaning through culturally and experientially specific contexts. Denotative meanings of images referring solely to an objective reality, while “utopianically” possible (Barthes, 1977, p. 42), are in practical terms always influenced by the artist’s individual context. While Barthes considers photographs as the closest to a purely denotative visual art form, Sontag (1977) posits “photographs are as much an interpretation of the world as paintings and drawings are” (p. 6). Additionally, what is known from the meaning of any given image can change as meaning is “created each time it is viewed” (Sturken & Cartwright, 2001, p. 25). This study adopts that same ontological view to words and numbers. Multiple readings of a written text or numeric

computations spark different understandings. Alone, images cannot adequately serve the research needs of this study. Together, these three convey what is known at the completion of this study. The epistemology section expands on the interconnections between these three.

This study assumes that adult learners have agency to create and modify social interactions. For this study, reality is considered to be subjectively defined differently by the researcher and each participant and to be influenced by interactions with the everyday physical and social world. Human action is mediated by the social. Acknowledging the socially constructed reality of the online formal learning environment, empirically measuring two types of artefacts of learners' online course activities, such as the mobile instant messages and the final grade, is an acceptable process to understand, in part, the relationship between learners' actions and academic performance in a course (Joksimovic et al., 2015; Kershnik, 2016; Liu et al., 2009; Pattison, 2017; Shelton et al., 2017). Additionally, subjective reflections by the primary researcher capture the practical experiences of this action research. "Although action research... works at the level of the individual, it is always... located and influenced by a wider environment" (J. McNiff & Whitehead, 2002, p. 15). The primary researcher is not a subject of this study to be viewed in isolation (J. McNiff, 2017, pp. 43-45), but as a lens through which to understand this action research in relation to its context.

Epistemology considers the nature of knowing. Knowledge is socially constructed through human interactions. An individual's learning is affected by that individual's interactions with other humans. One type of artifact of those interactions in this study is data from the individual mobile instant messages between participants in course related

WhatsApp groups. Another source of data is the final course grade of each participant, as a quantitative measure of individual academic performance. These comprise the key beliefs in how knowledge is drawn from the quantitative elements of the study.

The epistemological grounding of the qualitative portion of the study is supported firstly by the literature and secondly by capacity of the primary researcher. How an action researcher knows something is based on individual action and participation in the collective sharing of knowledge. The form of action research selected for this study creates knowledge from the observations of the practitioner internal to the action intervention. The first-person reflective practice documents, questions, and analyzes experiences in the form of written words and/or artistic visual images. “Arts-based research can encourage thinking outside the box, generating new ways of interrogating and understanding the social” (Bagnoli, 2009, p. 548). Art making and writing are “not separate illustrative of each other but interconnected and woven through each other to create additional and/or enhanced meanings” (J. G. Knowles & Promislow, 2008, p. 515). Similarly, Bagnoli (2009) does “not consider visual data as an add-on to the text-based analyses, but as significantly contributing to making sense at all different stages in the analytical process” (p. 567).

As the primary researcher in this study, I disclose that I use words, numbers, and images to understand the world. As products of communication, each is culturally laden. Because they render analogies of reality, they have limitations on how they inform the creation of new knowledge. I use them to inform action. I learned from architecture how different stages of design (be it writing the architectural program, drawing the concepts, or building a model) could render different types of solutions. Weber (2008) articulates

the blurring of, and possible confusion around, visual art as being “both method of inquiry and the mode of interpretation and representation, reminding us that any attempts to completely separate method from findings is artificial and somewhat arbitrary” (p. 49). R. L. Lawrence (2015) describes arts-based research as a dynamic approach to conducting qualitative research and expanding its dissemination (p. 142). Visual arts, mathematics, and English are my three primary languages for understanding the world. The underlying logic of balance, progression, focus, simplicity, and beauty of each make it difficult to demarcate where one ends and another begins. I use all three throughout this doctoral research. My tacit knowledge of each informs its inclusion at any given point as I determine its usefulness to address a specific aspect of the research problem. Arts-based action research most closely matches my personal epistemology.

In academic research, axiology is concerned with how research is value laden. Action research “assumes that the researcher is in relation with everything else in the research field, and influences, and is influenced by others. The research field cannot be studied in a value-free way, because the researcher brings their own values with them” (J. McNiff & Whitehead, 2011, p. 30). There are four sets of values underpinning this study. The values pertain to the research, learners, the measures, and academia.

“Values of social justice and individual autonomy... animate action research” (J. McNiff & Whitehead, 2002, p. 15). Action research values the unique perspective of the practitioner-researcher. Action research is “designed to be carried out by practitioners in the actual practice setting” in order to “improve their practice and better understand the nature of that practice” (Kuhne & Quigley, 1997, p. 24). Drawing from Dewey’s (1929) argument for a science of education, action research values educational practice

as both the source of research data and the arena for the final test of research conclusions. Dewey writes, “Practice alone can test, verify, modify and develop the conclusions” of educational research (p. 34). Action research values a diversity of approaches to conducting educational research, including arts-based. Including the arts in the reflection component of this action research values creating art as inherently reflexive (Weber, 2008, p. 46) and values drawing and painting to allow “the time to reflect about the issues being explored” (Bagnoli, 2009, p. 548) and that some ideas are best expressed visually rather than textually or mathematically. This study values the interconnected strength of written, mathematical, and artistic data, analysis, and dissemination.

This study values the participants by demonstrating three forms of respect: universal, protective, and compensatory (J. A. Lawrence et al., 2013, p. 104). Universal respect as applied to this study values the learners’ innate albeit not legal, human right to pursue higher education (INEE, 2010; Sphere, 2018; United Nations General Assembly, 1948, Article 26, Section 1) and the free will to consent to and withdraw from participation in this research study (Canadian Institutes of Health Research et al., 2014). Protective respect requires the participants be safe from harm resulting in participating in this research (Canadian Institutes of Health Research et al., 2014). While contemporary ethical guidelines in conducting human research involve a requirement to do no harm (MacKenzie et al., 2007), researchers of persons of concern take this further to require that research into others’ suffering can only be justified if alleviating that suffering is an explicit objective (Turton, 1996, p. 96). This dovetails with the concept of compensatory respect. As J. A. Lawrence et al. (2013) outline for research about refugees, this respect informs the pursuit of “the possibility of carefully constructed research that can make

positive contributions to the experiences of refugees” (p. 104). Thus, action research is an appropriate methodology to apply because this research resolves the problem of a low level of interaction between learners in the different locales.

Understanding the educational experiences of any learner is more complex than a single study can reveal. This study, as designed, is incomplete in capturing all experiences of the researcher and participants in regards to answering the research questions. A post-modern research perspective “allows us to know something without claiming to know everything” (van Halen-Faber & Diamond, 2008, p. 518). This research is succinct on three aspects that contribute to the collective academic knowledge. The first two are the experiences of the researcher conducting this action research and openly releasing the data. The third is reporting on the relationship between the demonstration of social presence and final grade of the participants. This research values exploring social presence as defined within the Community of Inquiry (CoI) Framework while acknowledging it is but one of the presences within the CoI. It values online course messages posted by learners as a rich source of data. It values the work necessary to achieve a final grade in an undergraduate credit course.

The third set of underlying values to this research is about research itself. Past research is valued for contributing to the knowledge base upon which this research is built. This is mentioned here not because doctoral research standards require a literature review but because action researchers explicitly identify the need to foster “respectful relationships with prior literature” (J. McNiff & Whitehead, 2011, p. 30). This may be to bridge the long-standing divide between applied research and theoretical research in education (Quigley, 1997 p. 12). This study values the open dissemination of its findings

and data as a transparent contribution to the critical discourse of academia to test, strengthen, and expand the understanding of the experience of distance learning. These values motivate the researcher's curiosity to pursue this exploration. Combined, the ontology, epistemology, and axiology inform the research approach.

Paradigm and Research Methodology

Jacobsen and Landau (2003), in presenting a scathing critique of the research about persons of concern, distill the issue down to the ill-resolved competition between academic and policy imperatives resulting in flawed methodological designs. Research on persons of concern is often more journalistic, sufficing the needs of policy makers or funding bodies, rather than academic rigor. Perhaps this relates to the issue of deficit thinking, raised earlier, that some researchers approach working with persons of concern under the premise that something is better than nothing. Conducting research in complex, dangerous, and difficult settings places refugees “at great risk of exploitative and damaging research practices... however unintended this might be” (Pittaway et al., 2010, p. 231). “For a variety of reasons, it is extremely difficult to accomplish refugee research” (Jacobsen & Landau, 2003, p. 195). Celestina (2018) provides an overview of the complex challenges of research practiced in conflict and post-conflict environments where populations are marginalized in dynamic contexts fraught with political, social, and economic instabilities. The research study is positioned with the view that greater ethical academic rigor, not less, is required when working with persons of concern (S. P. Campbell, 2017; Osman, 2017) This study, as Coghlan & Brydon-Miller (2014) describe with any action research seeks “understanding in order to transform” (p. 350).

As an example, one factor will be used to highlight the concerns. Demonstrating the aim of protective respect, by “doing no harm” while conducting research in emergencies is difficult to predict or control (M. B. Anderson, 1999; Jacobsen & Landau, 2003; Pittaway et al., 2010). “Many researchers do not adequately consider how their enquiries put their subjects at risk, particularly in conflict zones or hosting areas where the displaced are highly vulnerable” (Jacobsen & Landau, 2003, p. 193). There are two sides of the research dialogue that are uniquely altered in the context of emergencies. One is on the part of the participant. Krause (2017) notes that participants from many different studies of persons of concern often confuse research questions with the participants’ legal asylum procedures, even after the researcher explains the difference. “In the process of justifying their asylum claims, giving the ‘right answers’ is crucial, since ‘wrong answers’ can have radical implications such as detention, rejection or deportation” (Krause, 2017, p. 10). Misunderstanding of how answers to researcher’s questions will be used, respondents may render substantially unreliable answers. Persons of concern “might (consciously or unconsciously) be reluctant or afraid to tell researchers their true views, or they might wish to promote a particular vision of their suffering. Their responses could be part of their survival strategy” to not jeopardise their position in their communities (Jacobsen & Landau, 2003, p. 192). This study draws data from the learner-led online discussions for the entire course. Researchers (Celestina, 2018; Krause, 2017; Pittaway & Bartolomei, 2013) use this same approach to ensure no mediation or influence by the principal researcher on the participants’ communications and the voices of participants are heard in their entirety in situ, in the context that participants originally intended.

Flawed reasons for conducting the research are the other part affecting the reliability of research inquiries built upon researcher-participant dialogue. Krause (2017) describes the “the current boom” of research in the fields of forced migration, conflict, and post-conflict studies carried out in search of personal adventure and curiosity for seeing foreign adversity, misery, and suffering as an exotic edgy experience of self-discovery as dangerous and unethical (p. 28). Conducting research with persons of concern means working in highly politicized insecure regions of the world. As a measure to reduce potential harm, direct participant response to questions should only be sought if they are germane to the research question (Canadian Institutes of Health Research et al., 2014). This study obtained data from the online discussions in WhatsApp and individual participants’ final grade, gender, and locale as identified in the Moodle course and first-person reflections of the researcher, in order to reduce the potential harm to participants while achieving access to a rich source of data to investigate the research questions. This is both ethically and academically sound.

The feminist research paradigm informs the work of many studying education and persons of concern. While this is not the basis for this study, feminist theories are possible lens through which to view the results. The protection of women and girls is such a significant problem that UNHCR has a division dedicated to these issues. The act of being forcibly displaced means losing one’s social safety net and having to reconstruct a means to express agency within and struggles against forms of domination of the new culture. Issues of privilege, oppression, and identity are likely to arise in the communications of the participants as they live in fragile contexts “shaped by structural restrictions, diverse forms of violence and limited livelihoods” (Krause, 2017, p. 3). The

principal researcher was open to issues raised by participants or the teaching team that may influence participants' engagement in the course, or involvement with this study.

Research Questions

To restate from *Chapter One* the research questions are:

1. What are the experiences of the researcher implementing mobile instant messaging (MIM) in an international multi-site blended learning course in which some learners are persons of concern?
2. What are the experiences of the researcher releasing the source data of this study openly?
3. What is the relationship between the demonstration of social presence in course-related mobile instant messages and the final grade for higher education learners in an international multi-site blended learning course in which some learners are persons of concern?

This study considers how the results of the third research question vary by the learners' gender, locale, or WhatsApp group.

Research Design

Role of the Researcher

The context of the role of the researcher in this study, mirrors two quotes from Jacobsen and Landau's (2003) critique of the research about persons of concern. The first is a general comment about considerations for all researchers. "While it can be argued that all research affects subjects, clearly there are matters of degree, and the greater the researcher's involvement, the greater the effect is likely to be" (p. 192). The second is about the uniqueness of working with persons of concern. "The simple act of asking

questions becomes loaded in the political pressure cookers that are conflict zones” (p. 194). The role of the principal researcher in this study was two-fold. One role was as the sole person to build and provide technical support for all the WhatsApp discussion groups, but not to provide curriculum instruction in the EDUC 3711 course. The other role was to conduct this research project as described, participate in open research practices, and reflect on the experience. The separation of teaching and research roles were clearly demarcated as the course professor had sole responsibility for grading the work of the learners, and no mark was given for participating in online discussions. The course professor was not in any of the WhatsApp groups and did not see the WhatsApp chat messages before being anonymized and de-identified. This has ensured the participation of any learner could not influence the professor’s rapport with the learners while in this course or in any future course in which the professor is involved.

Population and Sampling

A common sampling strategy in content analysis research on the social presence in online course communications is to limit data collection to discrete windows of time, such as collecting course communications created during one week within a multi-week course. Fortunately, the course studied in this research was a condensed four-week course offered in June 2018. This made it practical and manageable to work with data throughout 100% of the course’s delivery time. As social presence is understood as a progressively developing construct that changes over time (Garrison, 2009, p. 6; Garrison and Akyol, 2013, p. 108), this study investigates those changes.

The course had four group assignment topics, health; primary and secondary education (K-12); technical and vocational education (TVET); and higher education. The

learners were asked to send their ranked preferences for group topic to the professor. He composed the groups mainly from learners' first choices. He aimed for similar group sizes and representation from all three locales in each group. Gender balance could not be achieved. As the groups were formed from learners' identified preferences, it was desirable to choose a sample for this study that included representation of all four group topics.

Table 1

Comparison of Demographics for Consideration in Sampling

Total	Locale			Gender		Group topics	Gross ^a chats
	CA	KE	TH	Male	Female		
A: All participants and non-participants							
93	18	24	51	47	46	4	4179
	19%	26%	55%	51%	49%		100% of total chats
B: All participants							
60	9	15	36	28	32	4	n/a ^b
	15%	25%	60%	47%	53%		
C: From groups comprised solely of all participants							
29	6	8	15	13	16	3	2998
	21%	28%	52%	45%	55%		72% of total chats
D: From groups with no more than one non-participant							
43	7	11	25	22	21	4	3209
	16%	26%	58%	51%	49%		77% of total chats

^a These are gross estimates because the chats authored by non-participants had not been removed from the total chats of non-participants and participants.

^b This could not be estimated since gross estimates are comprised of chats authored by non-participants and participants.

A representative sample of participants was drawn considering two demographic factors (locale and gender) and two non-demographic factors (the group assignment topic and the estimated gross number of chat messages). Table 1 illustrates the comparative representativeness of different sample inclusion criteria. While there is no set minimum number of chat messages required for this study, it was desirable to find a demographically representative sample that captures a large number of chats. Section D shows such a sampling. This sample is comprised of participants from groups with no more than one non-participant. It exactly matches the gender split of the class and all four group assignment topics. Of the three samples it most closely matches the locale representation in the class. For these reasons, this study samples data from participants who were members of groups with no more than one non-participant.

A limitation of this study is that it cannot be generalized to all persons of concern pursuing post-secondary education in a blended setting, because it is a small-scale study. This limitation is similar to other research studies on persons of concern, which are predominantly small-scale studies (Jacobsen & Landau, 2003, p. 190). “One of the most significant problems of small-scale studies is that while they yield in-depth and valid information, they are seldom representative of the target population about which the researcher wishes to make claims” (p. 194). In response to this limitation, this study is designed to openly release the data, so it may be included in future studies that may be large enough to draw generalizable conclusions.

Ethics Considerations

As a Canadian research study, the framework for ethical research practice must be aligned with the *Tri-Council Policy Statement: Ethical Conduct for Research*

Involving Humans (TCPS-2) as set out by the Tri-council comprising of representation from Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada (Canadian Institutes of Health Research et al., 2014). Where particular ethical obligations to individuals in vulnerable circumstances exist, the TCPS-2 explicitly states that special procedures are required (p. 43). The details of those special circumstances for this research draw from the INEE standards (2010). Together, these two documents guide the ethical decisions of this study.

The first international code of research ethics was developed as a result of the 1947 Nuremberg Tribunal court's decision in prosecuting 23 Nazi doctors for war crimes (Murphy, 2004, pp. 307-308). This code was originally documented as a ten-point section called *Permissible Medical Experiments* of the document titled *Trials of war criminals before the Nuernberg military tribunals under Control Council Law No. 10* (Nuernberg Military Tribunals, 1949, pp. 181-182) and is more commonly known as The Nuremberg Code (see Appendix E). The principles of the Nuremberg Code continue as the cornerstones to human research ethics guidelines today (Canadian Institutes of Health Research et al., 2014; INEE, 2010). The following will be discussed more fully in the context of this study: (Statements 1 & 9) informed freedom to consent and to leave the study, (Statement 2) that the results are 'good' for society and there is no other way to procure these research results, (Statements 4 & 6) the risk of harm in participating is appropriate to the humanitarian benefit (as cited in Murphy, 2004, pp. 307-308).

It is easy for a researcher to fall unwittingly into the oppressive role of colonizer by entering the arena of the persons of concern solely to serve the purposes of the

researcher. “The basic ethical principles established to guide research on human subjects are necessary but insufficient for research in conflict and post-conflict environments” (S.P. Campbell, 2017, p. 91). One must be sensitive to the potential for the researcher to disturb or inadvertently exploit vulnerable populations. This research complies with the international standards to respect the rights and dignity of individuals in emergency situations to not be burdened by participating in research (INEE, 2010; Sphere, 2018). The ethics issues are complex and are diligently addressed at all stages of the study. “Many researchers do not adequately consider how their enquiries put their subjects at risk, particularly in conflict zones or hosting areas where the displaced are highly vulnerable” (Jacobsen & Landau, 2003, p. 193). Because of this and concerns raised by teaching team members of the EDUC 3711, particular care is taken to protect the privacy of the participants by removing any politically controversial WhatsApp chat messages or first-person reflections of the researcher that may put individuals or groups of individuals at risk if released publicly.

There was a great dependence upon the generosity of the learners to consent to the study. Given the extreme humanitarian emergency context in which some of the learners live, any incentives may “amount to undue inducement and thus negate the voluntariness of participants’ consent” (Canadian Institutes of Health Research et al., 2014, p. 27). Based on the good consent rate of learners in the June 2017 iteration of this course to participate in a similar study (MacIsaac, 2017b) that did not use any incentives, no incentives to participate in this study were offered to the learners in the June 2018 iteration of this course.

In 2017, the principal researcher worked with a study of June 2017 deployment of the EDUC 3711 course, knowing that the raw data from that study could not be used in this dissertation research. Leading up to the June 2018 deployment of the course, two concerns became evident. Firstly, funding for the course was uncertain beyond June 2018. Secondly, there was not enough time to obtain dissertation committee approval of this study's research proposal and also have enough time to receive ethical approvals through both Athabasca University and York University. Because of these concerns an unconventional approach for this dissertation research was adopted. Ethical approval was sought before the dissertation committee had approved of the research proposal. Certificates were received granting ethical approval through Athabasca University (see Appendix A) and York University (see Appendix B). Notably, approval was received for the first Athabasca University dissertation with a planned preservation to release the data involving human participants openly in perpetuity, rather than with a planned destruction of data on a specific timeframe. All institutional research ethics board requirements were followed as well as those set out by international humanitarian standards.

Data Collection

Participant Names

The Kenyan-based learners interchange French, English, and Somali names. Cranitch and MacLaren (2018) describe similar challenges with names of Myanmar refugees learners based in Thailand. They write, with an example drawn from the Karen people, an ethnic group in Myanmar:

The concept of a fixed identity, a name and birth date enshrined in formal documentation is often unfamiliar in ethnic communities whose cultural traditions

stem from remote rural villages with low levels of literacy. Furthermore, for the sake of protection, many refugee families adopt new identities and change their names when arriving in camp. The use of various scripts creates additional problems when, for example a Karen name is transliterated into English by different officials results in sometimes widely varying spelling. The issues clearly challenge the routine university student data systems. (p. 269)

Add to this the layer of bureaucracies in which persons of concern function, and one learner could have a different name for each of the following, home country government issued ID name, ration card name, and UNHCR issued ID. If a mistake had been made on the UNHCR ID, then that mistake would follow through all the subsequent documents created as a result of that one. There were Canada-based participants who used different names for themselves than the ones listed in Moodle. For various reasons each of the three locations provided challenges in maintaining name consistency throughout the study. It becomes complicated to accurately creating the WhatsApp groups and matching each group member to the learner's York University information.

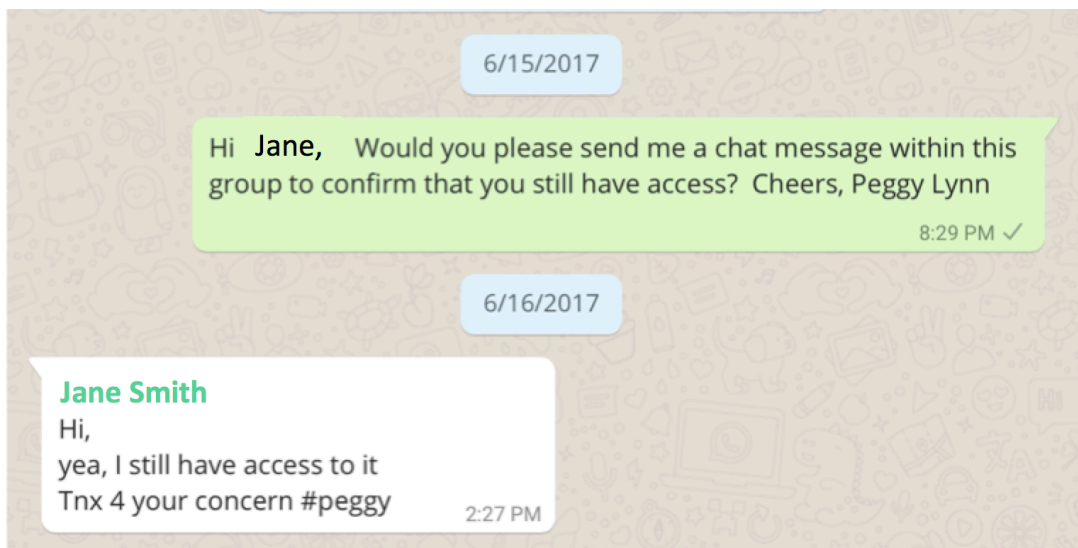
Faced with these naming challenges, I asked if it was disrespectful to use only the name as displayed on the York University Moodle course. I was reassured that the learners understood the use of names within a bureaucracy. For this study, each participant was identified in the WhatsApp groups using the name as it was listed in the York University Moodle course. The de-identifying and anonymizing steps will be explained later in this chapter.

Mobile Instant Messages

The independent data for this study are the WhatsApp mobile instant messages (MIM). This study collected 100% of the mobile instant messages sent in the EDUC 3711 course offered in June 2018. In this study, there were 4179 messages total messages authored by participants and non-participants. The desktop access to the WhatsApp mobile application was used to manage twenty discussion groups in the class and to export the data.

Figure 1

WhatsApp Mobile Instant Messaging Chat Interface



The following is a detailed description of how the data was collected in the form of WhatsApp mobile instant messages, and then processed as lines in text files before it could be analyzed as cells in Excel spreadsheets. The examples used here are drawn from a chat message dialogue between the researcher and a participant from the 2017 study.

The participant's name has been replaced with the pseudonym Jane Smith. Figure 1 illustrates how the chat messages are displayed within WhatsApp mobile instant messaging interface. These two messages are used to illustrate how the data was processed.

Weekly, throughout the running of the course, the WhatsApp chat discussions of all groups were downloaded. They were exported from the primary researcher's mobile phone to the primary researcher's desktop computer. Figure 2 is an example of how the raw data of the above chat messages was exported as a text file.

Figure 2

Raw Data Text Files

```
2017-06-15, 8:29:20 PM: Peggy Lynn MacIsaac: Hi Jane, Would you please send me a chat message within this group to confirm that you still have access? Cheers, Peggy Lynn  
2017-06-16, 2:27:40 PM: Jane Smith: Hi,  
yea, I still have access to it  
[Tnx 4 your concern #peggy
```

There are two elements of the text files that are problematic for importing to an Excel spreadsheet. The unit of measure in this study is an individual chat message, because it is an objectively identifiable unit defined by the author of the message and this unit produced a manageable set of cases (Joksimovic et al., 2015; Rourke et al., 2001; Strijbos et al., 2006). The correspondence in Figure 1 is clearly two messages. Since the first message has no hard returns in it, it is recognized as one message. Since the second message has hard returns in it, the data needs to be processed in order for it to be recognized as one message. See Figure 6 for an illustration of how Excel imports the

messages with hard returns within one message. A further description follows later in this section. To correct the problem with the second message, the hard returns need to be removed in the text files before importing into Excel to be analyzed. These are removed manually. The result would appear as shown in Figure 3.

Figure 3

Raw Data Text Files with Hard Returns Removed

```
2017-06-15, 8:29:20 PM: Peggy Lynn MacIsaac: Hi Jane, Would you please send me a chat message within this group to confirm that you still have access? Cheers, Peggy Lynn
2017-06-16, 2:27:40 PM: Jane Smith: Hi, yea, I still have access to it Tnx 4 your concern #peggy
```

The second problem derives from the delimiters between the fields of date, time, author's name, and message. Both commas and colons are used. Plus, colons are used to separate hours, minutes, and seconds within the time field. Both of these problems render importing from the above shown delimited text files into Excel unmanageable. To address this a computer program is built to convert the text files as shown in Figure 3 into bar delimited fields for ease of import to Excel as shown in Figure 4.

Figure 4

Converted Raw Data into Bar Delimited Fields

```
2017-06-15 | 8:29:20 PM | Peggy Lynn MacIsaac | Hi Jane, Would you please send me a chat message within this group to confirm that you still have access? Cheers, Peggy Lynn
2017-06-16 | 2:27:40 PM | Jane Smith | Hi, yea, I still have access to it Tnx 4 your concern #peggy
```

This conversion allows importing the messages into an Excel spreadsheet, displaying for each message the four discrete fields of date, time, name of author, and content of message, as seen in Figure 5.

Figure 5

Example of Correctly Imported Raw Data File into Excel Spreadsheet

	A	B	C	D
1	2017-06-15	8:29:20 PM	Peggy Lynn Maclsaac	Hi Jane, Would you please send me a chat message within this group to confirm that you still have access? Cheers, Peggy Lynn
2	2017-06-16	2:27:40 PM	Jane Smith	Hi, yea, I still have access to it Tnx 4 your concern #peggy

Without the hard returns removed, Excel displays Jane Smith’s message on three rows with the identifying date, time, and name fields corresponding to only one of the three rows as shown in Figure 6.

Figure 6

Example of Incorrectly Imported Raw Data File into Excel Spreadsheet

	A	B	C	D
1	2017-06-15	8:29:20 PM	Peggy Lynn Maclsaac	Hi Jane, Would you please send me a chat message within this group to confirm that you still have access? Cheers, Peggy Lynn
2	2017-06-16	2:27:40 PM	Jane Smith	Hi,
3				yea, I still have access to it
4				Tnx 4 your concern #peggy

Once the data are imported into an Excel spreadsheet, all the chat messages authored by learners who did not consent to the study are removed.

Final Grades, Gender, and Locale

The data pertaining to the gender, and locale and final grade of each participant are collected from the online Moodle course. Gender is recorded as a binary field limited to either female or male. Locale is identified by the country in which the participant was living at the time of enrolling in EDUC 3711. Unfortunately, the final grades are issued as letters. In order to work with grades as a dependent variable within the SPSS software, the letter grade is converted into a percentage by using the middle point in the grade range as identified by the York University grading scheme (see Table 2). The conversion value is the value used in this study to represent the final grade in the course.

Table 2

Conversion of York University Grading Scheme

Highest	Lowest	Letter	Conversion
100.00 %	90.00 %	A+	95.0%
89.99 %	80.00 %	A	85.0%
79.99 %	75.00 %	B+	77.5%
74.99 %	70.00 %	B	72.5%
69.99 %	65.00 %	C+	67.5%
64.99 %	60.00 %	C	62.5%
59.99 %	55.00 %	D+	57.5%
54.99 %	50.00 %	D	52.5%
49.99 %	40.00 %	E	47.5%
39.99 %	0.00 %	F	00.0%

Note. Adapted from York University (2018) *Grades and Grading Scheme*.

First-Person Arts-Based Research Reflections

First-person reflections of the primary researcher are captured as the research unfolds, as described by J. McNiff and Whitehead (2011, p. 126). Schon (1983) refers to these as “reflection-in-action” for they are immediate and documented throughout the research action. First-person reflections of the primary researcher also include reflections after the research action, coined as “reflection-on-action” by Schon. Original written reflections were written in electronic Word documents, or transferred from paper to digital format. Visually rendered reflections are two-dimensional using the mixed media of pencil, ink, and paint. J. McNiff & Whitehead (2011) advise action researchers, “It is unlikely that you would use all the possible sources of data in your account. You would use your own common sense about what was sufficient to make your point” (p. 135). Images selected for inclusion in the dissertation were then digitized.

Data Preparation

Anonymize

Two processes were employed to ensure data remained anonymous. First-person reflections focus on the primary researcher’s experiences, which include interactions with other persons who, in turn, are not be identified by description or name. Photographs by and of participants were copied using hand-rendering illustration techniques. For example, Figure 7 is an illustration composed from a photo posted by Thailand-based learners, depicting their face-to-face learner-led study group.

Figure 7

Illustration of Refugee Learners in Group Study Session in Thailand



There were three steps to anonymize the WhatsApp data. Firstly, a unique identifier was assigned to each participant and member of the teaching/research team using WhatsApp. These are randomly generated numbers. The letter “L” precedes participant numbers and the letter “T” precedes numbers for members of the teaching and researching team. The primary researcher was the sole person with access to the list of names and their corresponding unique identifiers. Secondly, a formula was created to replace each name with its unique identifier in the MIM excel worksheets. Then the full names and related formula were removed. Lastly, names were manually removed from the messages (see Figure 8). This needed to be done manually because of typos and multiple versions of names used by participants to address each other.

Figure 8

Excel Display of Anonymized Data

	A	B	C	D
1	2017-06-15	8:29:20 PM	T-201	Hi [L-155], Would you please send me a chat message within this group to confirm that you still have access? Cheers, [T-201]
2	2017-06-16	2:27:40 PM	L-155	Hi, yea, I still have access to it Tnx 4 your concern #[T-201]

Coding Instrument

The indicators for social presence within the Community of Inquiry (CoI) framework are the basis for developing the coding instrument used in this study. In addressing issues of reliability in content analysis Cohen et al. (2011) acknowledge that, “pre-existing categories may need to be modified if they don’t fit the data” (p. 573). Two social presence indicators are removed from the coding instrument because they are not relevant to WhatsApp. The indicator called *Continuing a Thread* identifies the use of a reply feature within the communication software to continue a discussion thread rather than starting a new one. WhatsApp group’s chat have only one thread; therefore, multiple threads are not possible using this software. The indicator *Quoting from another’s message* is also technologically irrelevant to WhatsApp mobile chats. Both of these are removed from the coding instrument used in this study.

Over time various researchers have modified or added indicators of social presence into their data coding instruments. One example is the work of Swan and Shih (2005) that parses social presence indicators into finer categories based on an extensive review of the literature. They find research supported the splitting of (a) *Expressions of Emotion* into two indicators, separating words from paralanguage expressions of

emotions; (b) *Self-disclosure* into three indicators -- expressions of (i) personal values, beliefs, and attitudes; (ii) personal information and vulnerability; (iii) social sharing of information unrelated to the course; and (c) separating greetings and salutations from other *Phatics* (pp. 135-136). The above listed modifications to the indicators of social presence in online communications are included in the original indicators for social presence (Rourke et al., 1999). Swan and Shih (2005) also add three new indicators of social presence, *Approval*, *Personal Advice*, and *Course Reflection*, for which there is no support within the literature that they reviewed (pp. 135-136). Five years later, Shea et al. (2010) also include the indicator *Personal Advice* in their research (p. 19). These three indicators fit well within the original CoI Framework but within the indicators for teaching and cognitive presences not social presence. For these reasons, the modifications to the coding instrument for social presence set forth by Swan and Shih (2005) are not used in this study.

The expression of disagreement is a modification to the indicators for social presence used in the research of both Swan and Shih (2005) and Shea et al. (2010). Swan and Shih (2005) change the original indicator *Expression of Agreement* to be *Expression of Agreement or Disagreement*. Shea et al. (2010) resolve this differently and added *Expressing Disagreement* as a separate indicator for social presence. The authors of the seminal works on CoI identify areas of disagreement as a component of *facilitating discourse* as defined within the element *teaching presence* (T. Anderson et al., 2001, p. 8). This study considers the inclusion of expressions of disagreement combined or separate from expressions of agreement. Joksimovic et al. (2015) in studying social presence in online courses find learners who “tended to agree with most of the posts

created by their peers were either superficially engaged into discussions or struggled with the course requirements” (p. 650). The seminal work on social presence in the CoI, by Rourke et al. (1999), describes the expression of disagreement as being “characteristic of those who share strong bonds (p. 60).” In a published transcript of a dialogue Marshall McLuhan speaks of people’s misunderstanding of his concept of a global village of people connected via electronic communication technology.

The more you create village conditions, the more discontinuity and division and diversity. The global village absolutely insures maximal disagreement on all points. It never occurred to me that uniformity and tranquility were the properties of the global village. It has more spite and envy. The spaces and times are pulled out from between people. A world in which people encounter each other in depth all the time [sic]. (McLuhan & Stern, 1967, p. 272)

Researchers exploring the gendered differences in the formation of social capital within education encourage the inclusion of positive and negative aspects of social networks (Mebane et al, 2007; Webb 2001). For these reasons, this study measures separately expressions of agreement and disagreement. In summary, the proposed coding instrument for social presence utilizes the three original CoI social presence categories of indicators, which are affective, interactive, and cohesive communications (Rourke et al., 1999) and eleven modified indicators as described in Table 3.

The participant ID is a three-digit randomly generated number. Groups are identified using two digits, from 11 to 18. Gender is assigned as 0 or 1. Locales are assigned 3 to 5. This ensures the number ranges for each data field are mutually exclusive to reduce researcher error in misunderstanding or transposing data values.

Table 3*Social Presence Indicators Coding Instrument*

Category	Indicator	Description
Affective	AF1: Emotion	Conventional expressions of emotion or unconventional expressions of emotions include repetitious punctuation, conspicuous capitalization, emoticons
	AF2: Humor	Use of humor, teasing, cajoling, irony, understatements, sarcasm
	AF3: Self-Disclosure	Self-disclosure – Presents details of life outside of class, or expresses vulnerability
Interactive	IN1: Chat referring	Referring explicitly to others' messages – Direct reference to contents of others' posts
	IN2: Questions	Asking questions — Learner ask question of other learners or the moderator
	IN3: Compliments	Complimenting, expressing appreciation – Complimenting others or content of others' messages
	IN4: Agreement	Expressing agreement – Expressing agreement with others or content of others' messages
	IN5: Disagreement ^a	Expressing disagreement – Expressing disagreement with others or content of others' messages
Cohesive	CO1: Using names	Vocatives - addressing or referring to participants by name
	CO2: Group references	Inclusive pronouns, addresses, or references to the group as we, us, our, group
	CO3: Phatic	Phatics, Salutations – Communication that serve as a purely social function; greetings, closures

Note. Adapted from Rourke et al. (1999, p. 61).

^a Added to this study's indicators.

Methods of Analysis

The qualitative data were evaluated for utility to depict the research experience so that it may be of use to future practice and research. First-person reflection can sometimes sidetrack research by egocentrically focusing on the researcher as subject.

Polanyi (1958) encourages researchers to “crave for universal” intent in their research, for it introduces responsibility that offsets the potential for “arbitrary egocentric decisions” (p. 325). Universal intent considers how the research might be widely useful to other researchers and practitioners when not statistically generalizable. The aim of this study, as Barone and Eisner (1997) describe, is to be “referentially adequate” meaning to shine enough light on the experience that the reader is able to understand the description (p. 102). Following the approach of J. McNiff and Whitehead (2011), the qualitative data were rigorously selected to produce a sincere account that is comprehensible to a wide audience (p. 152).

The details of the quantitative data analysis using SPSS software were determined based on the quantity and quality of the data collected. The choices of which SPSS data analysis tools to use were made at the time of testing the data collected for fit of purpose. *Chapter Four, Quantitative Results*, details the progression of statistical choices made during this study.

Assumptions

One assumption was that by enrolling in the credit course EDUC 3711 at York University, each learner had a goal of finishing this course. Thus, the final grade of this course is used as a measure of academic performance in the course. Another assumption was that learners would work together to complete the group assignment, for which the WhatsApp groups were created. Thus, their chat messages in the WhatsApp groups is a valid measure of course related communications between learners endeavoring to work together on the group assignment.

Another assumption was that learners would use the WhatsApp groups that were set up by the course for such communications. This assumption was proven false as one group chose to create their own WhatsApp group, and then invited me into it. This did not happen in the study in 2017, possibly because using the course WhatsApp groups had the added advantage of providing direct access to a designated teaching assistant to help. Since the assignment groups were learner-led for the 2018 study, this was no longer an advantage to using the course created WhatsApp groups.

A final assumption was that the content of the messages communicated would comply with the guidelines of acceptable learner conduct set out by York University's *Student Rights & Responsibilities* document (York University, 2021a). This assumption was based on the respectful conduct in the 2017 deployment of this course. This assumption was proven true, as there were no inappropriate messages sent.

Limitations

The context of this study has limitations. This study is limited to the population of learners who enrolled in the York University course EDUC 3711 offered in June 2018. Based on the challenges stated previously, the quantitative portion of this study relies solely on content analysis of WhatsApp chat messages for measuring demonstrations of social presence. This means not employing triangulation techniques such as individual interviews, questionnaires, pre and post course surveys, reflective journals by the learners, direct observation of learners while they work online or interacted in class, or focus groups. This research design does not capture data from other forms of communication between learners such as face-to-face during class time or outside class time; or online via other forms of social media, such as Twitter, Facebook, Moodle

messages, iMessage, Short Message Service (SMS), Snapchat, email, Instagram, email, or their own private WhatsApp groups. In reporting on the harm due to research conducted on persons of concern, Krause (2017) warns researchers to keep in mind that data collection instruments “should only be realized if it is indispensable to respond to a research question” (p. 3). Krause advocates against research that fishes for possible data by casting nets wider than the precise focus of the research questions. While narrow in scope, the data sampling is non-intrusive and densely rich, as all participants’ chat messages from everyday of the course were captured.

The two coders of the WhatsApp messages are from cultures different than those of the participants, leading to what Vladimirschi (2012) describes as common potential inabilities to understand specific cultural references in cross-cultural online course communications (p. 14). Ziersch et al. (2017) describe linguistic challenges of conducting cross-cultural research with persons of concern as limitations to research design. Jacobsen and Landau (2003) in their substantial critique of social science research on persons of concern identify that “the issue of language use and translation ... was rarely addressed” (p. 189) in the published research studies that they analyzed. It is likely that some nuanced communications such as slang, humor, or sarcasm may be missed or miscoded. Jacobsen and Landau (2003) warn, “Although there are almost always considerable logistical challenges facing researchers working with forced migrants, in no instance can these difficulties be allowed to justify ad hoc research design, obfuscation or exaggerated claims” (pp. 186-187).

This research utilizes correlation. Correlation is descriptive in nature, and “cannot be employed to draw conclusions with regard to cause-effect relationship between the

variables in question” (Salkind, 2010, p. 264). This research does not make conclusions about causal relationships pertaining to the research questions. To off set these limitations, a high academic rigor is sought for the methods employed in this study in order to record, analyze, and synthesize the data.

Delimitations

The research questions and design are crafted to best suit the fragile context of the learners in Kenya and Thailand. This research is non-intrusive in the participants’ lives while offering the potential to gather rich data, by using artefacts of learner-led course communications and first-person reflections of the primary researcher. Choices of communication software have specific delimitations and presumptions built in. Choosing WhatsApp mobile instant messaging for online course communications allowed for 24/7 access to a communication technology for learners during this course. WhatsApp was chosen even knowing that it was inherently limited in terms of capability to share documents, for participants to start a new discussion thread, etc.

Clarke and Bautista (2017) report cognitive and text-based activities as the most common forms of self-reflection in action research (p. 55). “Arts-based action research, an emerging subfield of action research, calls for researchers to extend action research beyond its cognitive borders” (p. 56). Arts-based first-person research broadens the means of reflection beyond text-based to include two-dimensional visual depictions. These are reflections of working with the course, conducting the study, and openly releasing the data. As stated previously, maintaining a universal intent in the first-person researcher reflections focuses the reflections on the study and helps avoid the researcher becoming the subject.

This study does not evaluate the design of this blended course or the global geopolitical contexts in which the course was offered. As discussed at length earlier, community, as viewed through the CoI Framework, is built on the strong interrelation of multiple presences, of which social is just one. This study investigates the demonstration of social presence and not the development of community within EDUC 3711. Following the approach that “the problem under investigation properly dictates the methods of investigation” (Trow, 1957/2004, p. 250) this study attempts to maximize what knowledge could be gained while minimizing the negative impact on the study participants who are persons of concern. While all researchers pursue standards of ethical research, there are added layers of consideration for those working with persons of concern.

Reliability and Validity

In action research, reliability is demonstrated by holding researchers accountable for their research and practices (J. McNiff & Whitehead, 2011, p. 77). Relying on first-person reflections risks that the researcher’s knowledge is false. Through the critically oriented process of inquiry, as described in this dissertation and grounded in the published literature of researchers in related fields, the burden of this study is, as Polanyi (1958) describes, to “seek knowledge that is not merely true, but also useful as a guide to a practical performance. It must strive for applicable knowledge” (p.185). Participating in conference dissemination throughout the research process ensures the perspective of the primary researcher is not academically myopic, and is informed by active engagement with other practitioners and researchers in higher education for emergencies.

There are various ways to address reliability and validity in content analysis. Negotiated intercoder agreement for 100% of the data increases the reliability of coding for CoI social presence indicators. This inquiry meets high standards of academic rigor, openness, and transparency throughout the research process in order to, as Cilesiz (2009) describes, allow future researchers to evaluate the transferability of the results and conclusions. Openly disseminating the final dissertation of the study and data to the academic community widens the opportunity for scrutiny of the work by other researchers.

Ethical validation (Creswell, 2014, p. 215) requires researchers to question their underlying assumptions, and consider the political and ethical implications. This study is not without considerable political and ethical concerns. Critical reflection on the part of the primary researcher documents these as they arise during this study. The impetus for this research is the political position that access to higher education for persons of concern is important. Access to face-to-face higher education for persons of concern is severely limited due to the geopolitics creating and maintaining their living conditions. Distance education, using online and mobile technologies, is well suited to provide access to higher education for this population. A particular concern for the management of the data collected for this study is to ensure that by shining a light on this area of higher education in emergencies the research does not jeopardize the ability of the programs offering the course to continue to work or compromise the safety of any individual learners or staff members. These are common issues for researchers working with persons of concern. Discussions were conducted with staff members in the various locales involved with this study to affirm the need to remove any texts within the

WhatsApp chat messages that may put individuals at risk if released openly with the other data. This attends to an additional level concern beyond merely anonymizing and de-identifying the data. Finally, openly releasing the data has an intrinsic element of accountability as others can verify the results through access to the anonymized and de-identified data set.

Chapter Three Summary

The methodological approach as described is congruent with the nuanced challenges of researching a population of distance learners who are persons of concern. This study, being situated in the area of higher education in emergencies, respects the international humanitarian standards set out to ensure accountability and sensitivity for working with persons of concern. The participants in this study were camp-based refugees living in Kenya, non-camp-based refugees living in Thailand, or non-refugees living in Canada. Their WhatsApp messages were coded for content demonstrating social presence as defined by the Community of Inquiry framework, and then analyzed for any relationship with academic achievement as demonstrated by the final grade. This research study endeavors to further the academic knowledge about international multi-site courses in which some of the learners were persons of concern at the time of studying. This knowledge is presented using the languages in which the primary researcher is skilled: mathematics, visual arts, and English text.

This dissertation is shared using the Creative Commons open license version 4.0 International for attribution, non-commercial, and no derivatives (Creative Commons, 2018). The anonymized and de-identified data files and descriptive metadata will be released openly under a Public Domain license through the primary researcher's personal

account at the University of Alberta Libraries' Dataverse Network. This allows for transparency of the claims made in this study and the opportunity for future researchers to evaluate the transferability of the results and conclusions of this study and potential reuse of the data.

Chapter 4. Quantitative Results

Data Coding

Two coders, the primary researcher and Mr. Mark McGregor, a thesis track masters candidate in educational leadership at Royal Roads University, employed negotiated coding of all chat messages. These two coders successfully negotiated the coding of 7,656 data points in the 2017 study of the EDUC3711 course using the same coding scheme for social presence indicators with coding of indicators being evaluated as consistent over time and between coders (MacIsaac 2017b). Together, intracoder reliability and intercoder reliability enhances the quality and reliability of the analysis.

Separately, each coder assigned each chat message eleven binary codes, one for each of the indicators of social presence. A one or zero respectively represented that indicator was or was not present in the chat message. The study's sample of 2,878 chat messages rendered 31,658 data points for each coder to code. The primary researcher then compared the 63,316 data codes. The coding agreement identified at this stage was called the non-negotiated agreement (see Table 4). Garrison, Cleveland-Innes, Koole, et al. (2006) state an advantage of negotiated coding is "that it controls for simple errors brought on by inexperience, coder-saturation or misinterpretation" (p. 3). This initial comparison identified mistakes in coding. The second message in Figure 8 will be used as an example. It reads, "Hi yea, I still have access to it Tnx4 your concern #[T-201]." If one coder were to identify this as using a name and one does not, then this would be identified as a mistake, since "[T-201]" unambiguously demonstrates that the learner named a member of the teaching or research team. At this stage of comparison this type of coding disagreement is documented as a coding mistake, with the corrected coding

then being assigned. Next, the coders met to discuss the remaining differences in coding the data points with the goal to see if any agreement could be reached.

In Table 4, the intercoder reliability is reported in terms of all three figures, the non-negotiated coding agreement (93.37%), the coding mistakes (6.44%), and the negotiated agreement (0.19%). Overall, 99.81% intercoder agreement was achieved in the first three phases with only 0.19% needing to be negotiated through a series of synchronous meetings with the two coders. Intercoder agreement varies by social presence indicator with none warranting more than 0.87% negotiation of coding. Across all indicators, coding agreement was achieved for all MIM chat messages, making the coded data reliable to use for analysis.

Table 4

Intercoder Reliability

	Non-negotiated agreement	Coding mistake	Negotiated agreement	Totals
Total coding (by count)	29,558	2,040	60	31,658
Total coding (by percentage)	93.37%	6.44%	0.19%	100.00%
Indicator coding (by percentage)				
AF1--Emotion	93.68%	6.25%	0.07%	100.00%
AF2--Humor	98.58%	1.39%	0.03%	100.00%
AF3--Self-Disclosure	87.94%	11.92%	0.14%	100.00%
IN1--Chat referring	98.37%	0.76%	0.87%	100.00%
IN2--Questions	93.22%	6.74%	0.03%	99.99%*
IN3--Compliments	92.53%	7.16%	0.31%	100.00%
IN4--Agreement	89.12%	10.46%	0.42%	100.00%
IN5--Disagreement	97.81%	2.05%	0.14%	100.00%
CO1--Using names	94.61%	5.39%	0.00%	100.00%
CO2--Group references	85.55%	14.38%	0.07%	100.00%
CO3--Phatic	95.62%	4.38%	0.00%	100.00%

* Less than 100% due to the rounding of each of the reported stages of negotiated coding.

Table 5

Participant Data at Indicator Level of Social Presence

Participant ID	Group	Gender	Locale	Grade	Total Messages	AF1--Emotion	AF2--Humour	AF3--Self-Disclosure	IN1--Chat Referring	IN2--Questions	IN3--Compliments	IN4--Agreement	IN5--Disagreement	CO1--Using Names	CO2--Group References	CO3--Phatic	SP--Total
101	15	0	5	85.0	9	0	0	3	0	3	0	3	2	3	3	1	18
102	17	0	5	72.5	203	20	7	28	5	32	20	44	4	24	34	26	244
107	11	0	4	67.5	29	4	0	6	2	7	7	7	0	5	9	6	53
108	17	1	3	85.0	329	34	15	46	4	84	33	79	9	73	64	32	473
109	13	1	5	72.5	3	1	0	0	0	0	2	1	0	1	0	0	5
110	17	1	4	67.5	72	5	0	14	3	17	9	18	4	16	13	7	106
113	18	0	5	85.0	116	4	0	8	0	22	19	7	1	13	27	14	115
114	12	0	5	77.5	36	6	0	5	2	7	5	6	2	0	7	2	42
116	12	0	4	67.5	85	3	0	10	2	6	7	14	0	11	4	0	57
117	15	0	5	95.0	28	1	0	4	0	3	0	2	2	2	9	8	31
118	17	1	4	72.5	52	0	0	11	0	6	2	8	0	12	6	1	46
119	14	1	3	95.0	64	10	1	12	2	10	16	18	2	14	29	3	117
126	13	1	5	85.0	6	2	0	1	2	0	2	0	1	2	2	0	12
130	14	0	5	77.5	12	1	0	6	0	2	1	2	0	3	0	0	15
131	16	1	5	72.5	65	20	0	24	0	9	18	12	7	30	12	14	146
132	18	1	3	72.5	28	5	0	5	0	4	10	7	0	5	7	2	45
134	17	1	5	77.5	303	53	13	34	0	44	27	49	4	49	39	30	342
135	14	1	3	72.5	4	1	0	1	1	0	2	1	0	1	0	0	7
136	18	1	5	85.0	30	3	0	4	0	3	4	2	0	5	5	5	31
137	13	0	5	77.5	2	0	0	0	0	0	1	1	0	0	0	0	2
139	18	1	5	85.0	85	3	0	17	1	19	12	8	2	4	32	8	106
142	16	1	5	85.0	16	1	0	2	0	0	1	7	1	1	1	4	18
147	15	0	4	85.0	26	1	0	4	0	10	2	9	3	5	7	9	50
149	12	0	4	67.5	31	0	0	12	2	6	5	9	0	7	10	3	54
150	18	1	3	77.5	66	4	0	8	0	12	12	18	1	14	14	11	94
151	14	1	5	95.0	114	11	0	10	5	27	14	26	2	17	35	13	160
152	11	0	5	85.0	38	1	0	6	0	9	8	8	0	12	9	11	64
153	17	0	4	77.5	171	1	2	32	0	12	17	36	9	30	23	14	176
158	16	1	5	85.0	171	22	1	16	1	25	34	31	4	32	44	28	238
162	11	0	5	85.0	19	5	0	5	0	2	4	7	0	5	3	0	31
164	13	0	5	95.0	19	1	0	2	2	1	2	1	2	9	4	3	27
165	14	1	5	85.0	6	0	0	3	0	3	0	2	0	1	1	1	11
166	15	0	4	77.5	16	1	1	4	0	0	2	3	2	3	1	1	18
169	13	0	3	72.5	9	1	0	2	1	0	2	1	2	0	2	0	11
175	11	1	5	85.0	66	13	0	10	0	15	16	11	0	21	27	7	120
182	11	0	5	72.5	15	3	0	3	0	0	3	2	0	1	1	2	15
183	12	0	5	72.5	188	43	1	24	8	43	23	30	6	11	23	13	225
184	16	1	3	95.0	124	56	0	35	2	17	45	25	11	21	45	17	274
187	12	0	5	85.0	6	0	0	1	0	1	2	1	0	0	0	1	6
188	12	1	4	77.5	27	1	0	2	0	2	5	5	0	1	1	4	21
189	18	1	4	77.5	44	1	0	6	0	0	6	7	2	4	5	5	36
190	16	0	5	85.0	82	10	1	19	3	13	32	10	0	10	22	15	135
195	14	0	4	85.0	63	4	0	6	1	22	30	18	2	20	20	11	134
<i>Totals</i>					2878	356	42	451	49	498	462	556	87	498	600	332	3931

Summary of Data

The summary of data for each participant is presented in Table 5. It displays each participant's group, gender, locale, and final grade. The data from the MIM chat messages are reported as the total messages sent; the total messages demonstrating each of the social presence indicators, separately; and the cumulative total number messages demonstrating social presence. All the statistical analyses build from this data.

Correlation Data Preparation

The previous section outlines how the data were gathered, coded, and counted. This section explains how the data were prepared for statistical analysis, and the results interpreted. The first two considerations of fit for analysis are the population samples based on demographics and the variables based on the CoI social presence indicators.

Demographics of Participants

Table 6 shows the demographics of the 43 study participants. Seven were living in Canada, one male and six female. Seven male and four female participants were in Kenya. Of the Thailand-based learners, 14 were male and 11 were female. These demographic factors along with the eight presentation groups inform how the data analyses would be conducted.

Table 6

Demographics of Participants

Gender	Canada	Kenya	Thailand	Totals
Male	1	7	14	22
Female	6	4	11	21
Totals	7	11	25	43

Statistical Cases

The population sample is disaggregated based on gender, locale, or group. These groupings are called statistical cases. The research questions and sub-questions produce 20 cases to analyze. The total number of participants (n) in each case determines a case's fit for statistical analysis (see Table 7).

Table 7

Case Sizes

Case	n
All	43
Males	22
Females	21
Canada-based	7
Kenya-based	11
Thailand-based	25
Canada-based Males	1
Canada-based Females	6
Kenya-based Males	7
Kenya-based Females	4
Thailand-based Males	15
Thailand-based Females	10
Group 11	5
Group 12	6
Group 13	5
Group 14	6
Group 15	4
Group 16	5
Group 17	6
Group 18	6

Three cases are removed from consideration because they are too small for Pearson's correlation analysis. The cases removed are Canada-based Males (n = 1), Kenya-based Females (n = 4), and Group 15 (n = 4). The remaining seventeen cases are used for Pearson's correlation analysis.

Aggregation of Variables

As this action research follows the steps act, observe, and then reflect, hypothesis statements are not made, nor are the precise statistical variables for analysis identified at the research design stage. The design paradigm adopts a reflection-in-action stance. This applies to the statistical analysis, whereby the appropriate selection of analyses to address the research questions emerges from investigating sufficient relevant data.

The total sample of 43 is too small to reliably analyze the study's intended 11 indicators of social presence from correlation through to regression. Because of this, the coded data from the CoI social presence indicators (Table 5) are aggregated to the level of three CoI categories of social presence (SP), affective (AF), interactive (IN), and cohesive (CO) (see Table 8). The input data for all the SPSS statistical analysis begins with the data listed in Table 8.

The Research Question 3 references the "demonstration of social presence" without precisely defining its bounds. Three forms of this concept are explored. The first form is a straightforward *count* of the number of messages coded for each of the three social presence categories separately and added together, named in this study as AF Count, In Count, CO Count, and SP Count (see Table 8).

Table 8*Participant Data at Category Level of Social Presence*

Participant ID	Group	Gender	Locale	Grade	Total Messages	AF Count	IN Count	CO Count	SP - Total
101	15	0	5	85.0	9	3	8	7	18
102	17	0	5	72.5	203	55	105	84	244
107	11	0	4	67.5	29	10	23	20	53
108	17	1	3	85.0	329	95	209	169	473
109	13	1	5	72.5	3	1	3	1	5
110	17	1	4	67.5	72	19	51	36	106
113	18	0	5	85.0	116	12	49	54	115
114	12	0	5	77.5	36	11	22	9	42
116	12	0	4	67.5	85	13	29	15	57
117	15	0	5	95.0	28	5	7	19	31
118	17	1	4	72.5	52	11	16	19	46
119	14	1	3	95.0	64	23	48	46	117
126	13	1	5	85.0	6	3	5	4	12
130	14	0	5	77.5	12	7	5	3	15
131	16	1	5	72.5	65	44	46	56	146
132	18	1	3	72.5	28	10	21	14	45
134	17	1	5	77.5	303	100	124	118	342
135	14	1	3	72.5	4	2	4	1	7
136	18	1	5	85.0	30	7	9	15	31
137	13	0	5	77.5	2	0	2	0	2
139	18	1	5	85.0	85	20	42	44	106
142	16	1	5	85.0	16	3	9	6	18
147	15	0	4	85.0	26	5	24	21	50
149	12	0	4	67.5	31	12	22	20	54
150	18	1	3	77.5	66	12	43	39	94
151	14	1	5	95.0	114	21	74	65	160
152	11	0	5	85.0	38	7	25	32	64
153	17	0	4	77.5	171	35	74	67	176
158	16	1	5	85.0	171	39	95	104	238
162	11	0	5	85.0	19	10	13	8	31
164	13	0	5	95.0	19	3	8	16	27
165	14	1	5	85.0	6	3	5	3	11
166	15	0	4	77.5	16	6	7	5	18
169	13	0	3	72.5	9	3	6	2	11
175	11	1	5	85.0	66	23	42	55	120
182	11	0	5	72.5	15	6	5	4	15
183	12	0	5	72.5	188	68	110	47	225
184	16	1	3	95.0	124	91	100	83	274
187	12	0	5	85.0	6	1	4	1	6
188	12	1	4	77.5	27	3	12	6	21
189	18	1	4	77.5	44	7	15	14	36
190	16	0	5	85.0	82	30	58	47	135
195	14	0	4	85.0	63	10	73	51	134
<i>Totals</i>					2878	849	1652	1430	3931

The second form of social presence data is a calculation of the count of each category of social presence (i.e. AF Count, IN Count, and CO Count) as a *percentage* of SP Count. For this study, these are respectively called AF Percent, IN Percent, and CO Percent. The third form of data is similar to the second form and is a calculation of the *count* variables (i.e. AF Count, IN Count, CO Count, and SP Count) as a percentage of the total messages communicated by the learner (Ttl Msg). The resulting calculations, while also percentages, are differentiated by naming them *ratio* (i.e. AF Ratio, IN Ratio, CO Ratio, and SP Ratio). These three forms of data to express the demonstration of social presence produce 11 variables to be tested for correlation with grade.

These additional two forms of data, named percent and ratio for this study, are rooted in the speculation that a particular mixture of the three categories of social presence predicts academic performance in this course. From this speculation emerges an underlying proposition that any such mixture would not change with the volume of messages sent by a learner. Put another way, it proposes that as a learner's total number of sent MIM chat messages increases so does the learner's demonstration of social presence. While possible, it needed to be confirmed.

To test this proposition correlation analyses are conducted between total demonstrations of social presence (SP Count) and total messages sent (Ttl Msg) for each of the cases. These 17 correlation analyses are the only ones not using the variable grade, and cannot be considered for inclusion in regression analyses. There is one further proposition underlying this study, that the demonstration of social presence is a useful predictor of academic performance for this population of learners. To interrogate this proposition, one pair of variables tests for correlation that does not include social

presence. It looks for any correlation between a learner's grade and the total messages sent by the learner. If a meaningful correlation is found due to sheer volume of messages then it weakens the proposition that any qualities about those messages mattered. These 17 correlation analyses are the only ones conducted without any social presence variables and cannot be considered for inclusion in regression analyses. There are 187 Pearson's correlation analyses conducted in order to understand the relationship, if any, between grade and each of the 11 social presence related variables described previously (*count*, *percent*, and *ratio*) in each of the 17 cases. The interpretations of these correlation outputs determine which if any regression analysis can be conducted.

Correlation Results

Benchmarks for Significance and Strength

Interpretations of correlation results use benchmarks for significance level and strength of correlation. Cohen et al. (2011) outline the history of using a p value of 0.05 and that this "cut level of significance is comparatively arbitrary, though high, and one should not ignore coefficients that fall below conventional cut-off point" (p. 616).

Looking through the correlation results using a p value of 0.05 as the cut-off, insufficient patterns emerge relevant to this study. By including data using a cut-off p value of 0.10 patterns emerge. The second element for interpretation is the degree of strength of correlation between the given pairings of variables. Pearson correlation coefficients (r) range from zero representing no association between the variables, to +/- 1 representing perfect correlation between the two variables. Cohen et al. (2011) present arguments cautioning against a rigid use of correlation benchmarks within this range, while presenting the following divisions as a starting point for interpretation of absolute values

of Pearson correlation coefficient as weak (0 to 0.1), modest (>0.1 to 0.3), moderate (>0.3 to 0.5), strong (>0.5 to 0.8), and very strong (>0.8) (Cohen et al., 2011, p. 617). The direction of association is documented for each correlation (i.e. a positive or negative correlation). Each correlation output is interpreted by (a) using the significance level of 0.10, while additionally identifying correlations that are significant at the levels of 0.05 or 0.01, and (b) using the above-described benchmarks for strength of relationship in identifying the variance that is common to each pair of variables. The correlation results for each case are reported in descending order of these strength benchmarks.

Correlation Results for Case All

For Case All (n=43), representing both genders and all the three locations, the correlation analyses results are tabulated in Table 9. The p value for each output is listed, while the Pearson correlation coefficients (r) are listed for only those that are significant at the 0.10 level (2-tailed). This choice of edited display is used for Tables 9 through 25.

A very strong positive correlation ($r = .958, p = .000$) is shown between the total number of messages demonstrating a social presence (SP Count) and total messages communicated (Ttl Msg). Moderate positive correlations are shown between grade and the calculation of total messages containing demonstrations of cohesive elements of social presence (CO Count) divided by the total messages containing demonstrations of any of the three categories of social presence (SP Count) labeled as CO Percent ($r = .456, p = .002$); as are grade and the calculation of total messages containing demonstrations of cohesive elements of social presence (CO Count) divided by the total messages communicated (Ttl Msg) labeled as CO Ratio ($r = .453, p = .002$). Grade and the

calculation of total messages containing demonstrations of affective elements of social presence (AF Count) divided by the total messages containing demonstrations of any of the three categories of social presence (SP Count) labeled as AF Percent shows a modest negative correlation ($r = -.277$; $p = .072$). The remaining variables show no significant correlation to grade. For brevity variable abbreviations are used for the remaining correlation discussions.

Table 9

Pearson Correlation Coefficients for Case All

Independent Variable	Dependent Variable	<i>r</i>	<i>p</i>
Ttl Msg	SP Count	.958 ***	.000 ***
Ttl Msg	Grade		.822
AF Count	Grade		.671
IN Count	Grade		.471
CO Count	Grade		.183
SP Count	Grade		.378
AF Percent	Grade	-.277 *	.072*
IN Percent	Grade		.125
CO Percent	Grade	.456 ***	.002 ***
AF Ratio	Grade		.679
IN Ratio	Grade		.948
CO Ratio	Grade	.453 ***	.002 ***
SP Ratio	Grade		.148

*** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Males

For Case Males, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 10). A very strong positive correlation is shown between SP Count and Ttl Msg ($r = .958, p = .000$). A strong positive correlation is shown between grade and CO Percent ($r = .539, p = .010$). There is a moderate positive correlation between grade and CO Ratio ($r = .482, p = .023$). There is a moderate negative correlation between grade and AF Percent ($r = -.405, p = .062$).

Table 10

Pearson Correlation Coefficients for Case Males

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.958 ***	.000 ***
Ttl Msg	Grade		.130
AF Count	Grade		.160
IN Count	Grade		.384
CO Count	Grade		.954
SP Count	Grade		.446
AF Percent	Grade	-.405 *	.062
IN Percent	Grade		.336
CO Percent	Grade	.539 ***	.010 **
AF Ratio	Grade		.183
IN Ratio	Grade		.934
CO Ratio	Grade	.482 **	.023 **
SP Ratio	Grade		.319

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Females

For Case Females, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 11). A very strong positive correlation is shown between SP Count and Ttl Msg ($r = .963, p = .000$). A moderate positive correlation is shown between grade and CO Ratio ($r = .413, p = .063$).

Table 11

Pearson Correlation Coefficients for Case Females

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.963 ***	.000 ***
Ttl Msg	Grade		.378
AF Count	Grade		.264
IN Count	Grade		.191
CO Count	Grade		.167
SP Count	Grade		.188
AF Percent	Grade		.760
IN Percent	Grade		.215
CO Percent	Grade		.141
AF Ratio	Grade		.670
IN Ratio	Grade		.969
CO Ratio	Grade	.413 *	.063 *
SP Ratio	Grade		.377

*** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Canada-Based

For Case Canada-based, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 12). Very strong positive correlations are shown between SP Count and Ttl Msg ($r = .978, p = .000$), and between grade and CO Ratio ($r = .810, p = .027$). A very strong negative correlation is shown between grade and IN Percent ($r = -.859, p = .013$). A strong positive correlation is shown between grade and AF Count ($r = .672, p = .098$).

Table 12

Pearson Correlation Coefficients for Case Canada-Based

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.978 ***	.000 ***
Ttl Msg	Grade		.320
AF Count	Grade	.672 *	.098 *
IN Count	Grade		.238
CO Count	Grade		.195
SP Count	Grade		.176
AF Percent	Grade		.831
IN Percent	Grade	-.859 **	.013 **
CO Percent	Grade		.215
AF Ratio	Grade		.357
IN Ratio	Grade		.838
CO Ratio	Grade	.810 **	.027 **
SP Ratio	Grade	.699 *	.100

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Kenya-Based

Only one Pearson correlation coefficient for Case Kenya-based data is significant at the 0.10 level (2-tailed) (see Table 13). It is a very strong positive correlation between SP Count and Ttl Msg ($r = .842, p = .001$). The remaining variables show no significant correlation to grade.

Table 13

Pearson Correlation Coefficients for Case Kenya-Based

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.842 ***	.001 ***
Ttl Msg	Grade		.935
AF Count	Grade		.535
IN Count	Grade		.529
CO Count	Grade		.518
SP Count	Grade		.662
AF Percent	Grade		.123
IN Percent	Grade		.413
CO Percent	Grade		.393
AF Ratio	Grade		.164
IN Ratio	Grade		.294
CO Ratio	Grade		.386
SP Ratio	Grade		.499

*** Correlation is significant at the 0.01 level (2-tailed).

Correlation Results for Case Thailand-Based

For Case Thailand-based, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 14). A very strong positive correlation is

shown between SP Count and Ttl Msg ($r = .978, p = .000$). A strong positive correlation is shown between grade and CO Percent ($r = .621, p = .001$). A moderate positive correlation is shown between grade and CO Ratio ($r = .478, p = .016$). Moderate negative correlations are shown separately between grade and AF Percent ($r = -.481, p = .015$), AF Ratio ($r = -.386, p = .057$), and AF Count ($r = -.381, p = .061$).

Table 14

Pearson Correlation Coefficients for Case Thailand-Based

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.978 ***	.000 ***
Ttl Msg	Grade		.286
AF Count	Grade	-.381 *	.061 *
IN Count	Grade		.282
CO Count	Grade		.756
SP Count	Grade		.301
AF Percent	Grade	-.481 **	.015 **
IN Percent	Grade		.213
CO Percent	Grade	.621 ***	.001 ***
AF Ratio	Grade	-.386 *	.057 *
IN Ratio	Grade		.356
CO Ratio	Grade	.478 **	.016 **
SP Ratio	Grade		.889

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Canada-Based Females

For Case Canada-based Females, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 15). A very strong positive correlation is shown between SP Count and Ttl Msg ($r = .976, p = .001$). A very strong negative correlation is shown between grade and IN Percent ($r = -.833, p = .039$). A strong positive correlation is shown between grade and CO Ratio ($r = .790, p = .061$).

Table 15

Pearson Correlation Coefficients for Case Canada-Based Females

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.976 ***	.001 ***
Ttl Msg	Grade		.473
AF Count	Grade		.184
IN Count	Grade		.380
CO Count	Grade		.329
SP Count	Grade		.301
AF Percent	Grade		.676
IN Percent	Grade	-.833 **	.039 **
CO Percent	Grade		.396
AF Ratio	Grade		.446
IN Ratio	Grade		.652
CO Ratio	Grade	.790 *	.061 *
SP Ratio	Grade		.595

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Kenya-Based Males

For Case Kenya-based Males, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 16). Very strong positive correlations are shown between grade and AF Count ($r = .945, p = .001$) and between SP Count and Ttl Msg ($r = .852, p = .015$). The remaining variables show no significant correlation to grade.

Table 16

Pearson Correlation Coefficients for Case Kenya-Based Male

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.852 **	.015 **
Ttl Msg	Grade		.922
AF Count	Grade	.945 ***	.001 ***
IN Count	Grade		.352
CO Count	Grade		.381
SP Count	Grade		.459
AF Percent	Grade		.217
IN Percent	Grade		.418
CO Percent	Grade		.343
AF Ratio	Grade		.294
IN Ratio	Grade		.230
CO Ratio	Grade		.332
SP Ratio	Grade		.378

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

Correlation Results for Case Thailand-Based Males

For Case Thailand-based Males, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 17). A very strong positive correlation is shown between SP Count and Ttl Msg ($r = .986, p = .000$). Strong positive correlations are shown between grade and CO Percent ($r = .699, p = .005$), and CO Ratio ($r = .680, p = .008$). A strong negative correlation is shown between grade and AF Count ($r = -.515, p = .060$). A moderate negative correlation is shown between grade and AF Percent ($r = -.466, p = .093$).

Table 17

Pearson Correlation Coefficients for Case Thailand-Based Male

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.986 ***	.000 ***
Ttl Msg	Grade		.130
AF Count	Grade	-.515 *	.060 *
IN Count	Grade		.106
CO Count	Grade		.504
SP Count	Grade		.152
AF Percent	Grade	-.466 *	.093 *
IN Percent	Grade		.248
CO Percent	Grade	.699 ***	.005 ***
AF Ratio	Grade		.272
IN Ratio	Grade		.597
CO Ratio	Grade	.680 ***	.008 ***
SP Ratio	Grade		.288

*** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Thailand-Based Females

For Case Thailand-based Females, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 18). A very strong positive correlation is shown between SP Count and Ttl Msg ($r = .973, p = .000$). Strong negative correlations are shown between grade and AF Percent ($r = -.622, p = .041$), and between grade and AF Ratio ($r = -.545, p = .083$). The remaining variables show no significant correlation to grade.

Table 18

Pearson Correlation Coefficients for Case Thailand-Based Females

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.973 ***	.000 ***
Ttl Msg	Grade		.916
AF Count	Grade		.378
IN Count	Grade		.891
CO Count	Grade		.986
SP Count	Grade		.863
AF Percent	Grade	-.622 **	.041 **
IN Percent	Grade		.906
CO Percent	Grade		.156
AF Ratio	Grade	-.545 *	.083 *
IN Ratio	Grade		.411
CO Ratio	Grade		.911
SP Ratio	Grade		.312

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Group 11

Only one Pearson correlation coefficient for Case Group 11 data is significant at the 0.10 level (2-tailed) (see Table 19). It is a very strong positive correlation between SP Count and Ttl Msg ($r = .995, p = .000$). The remaining variables show no significant correlation to grade.

Table 19

Pearson Correlation Coefficients for Case Group 11

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.995 ***	.000 ***
Ttl Msg	Grade		.447
AF Count	Grade		.535
IN Count	Grade		.516
CO Count	Grade		.443
SP Count	Grade		.469
AF Percent	Grade		.670
IN Percent	Grade		.828
CO Percent	Grade		.584
AF Ratio	Grade		.935
IN Ratio	Grade		.872
CO Ratio	Grade		.578
SP Ratio	Grade		.641

*** Correlation is significant at the 0.01 level (2-tailed).

Correlation Results for Case Group 12

For Case Group 12, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 20). Very strong positive correlations are shown between SP Count and Ttl Msg ($r = .967, p = .002$), and between grade and IN Percent ($r = .894, p = .016$). The remaining variables show no significant correlation to grade.

Table 20

Pearson Correlation Coefficients for Case Group 12

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.967 ***	.002 ***
Ttl Msg	Grade		.400
AF Count	Grade		.543
IN Count	Grade		.506
CO Count	Grade		.287
SP Count	Grade		.466
AF Percent	Grade		.369
IN Percent	Grade	.894 **	.016 **
CO Percent	Grade		.115
AF Ratio	Grade		.425
IN Ratio	Grade		.583
CO Ratio	Grade		.281
SP Ratio	Grade		.604

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

Correlation Results for Case Group 13

For Case Group 13, the following Pearson correlations coefficients are significant at the 0.10 level (2-tailed) (see Table 21). Very strong positive correlations are shown between SP Count and Ttl Msg ($r = .979, p = .004$); and between grade and CO Count ($r = .901, p = .037$), SP Count, ($r = .841, p = .074$), CO Percent ($r = .835, p = .078$), and CO Ratio ($r = .826, p = .085$). There are no significant correlations between the remaining pairs of variables.

Table 21

Pearson Correlation Coefficients for Case Group 13

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.979 ***	.004 ***
Ttl Msg	Grade		.132
AF Count	Grade		.434
IN Count	Grade		.225
CO Count	Grade	.901 **	.037 **
SP Count	Grade	.841 *	.074 *
AF Percent	Grade		.693
IN Percent	Grade		.299
CO Percent	Grade	.835 *	.078 *
AF Ratio	Grade		.862
IN Ratio	Grade		.199
CO Ratio	Grade	.826 *	.085 *
SP Ratio	Grade		.704

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Group 14

For Case Group 14, the following Pearson correlation coefficients data are significant at the 0.10 level (2-tailed) (see Table 22). Very strong positive correlations are shown between SP Count and Ttl Msg ($r = .965, p = .002$); as well as, between grade and CO Percent ($r = .932, p = .007$), AF Count ($r = .886, p = .019$), Ttl Msg ($r = .819, p = .046$), CO Count ($r = .817, p = .047$), and SP Count ($r = .804, p = .054$). A strong positive correlation is shown between grade and CO Ratio ($r = .745, p = .089$).

Table 22

Pearson Correlation Coefficients for Case Group 14

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.965 ***	.002 ***
Ttl Msg	Grade	.819 **	.046 **
AF Count	Grade	.886 **	.019 **
IN Count	Grade		.102
CO Count	Grade	.817 **	.047 **
SP Count	Grade	.804 *	.054 *
AF Percent	Grade		.204
IN Percent	Grade		.660
CO Percent	Grade	.932 ***	.007 ***
AF Ratio	Grade		.168
IN Ratio	Grade		.795
CO Ratio	Grade	.745 *	.089 *
SP Ratio	Grade		.890

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Group 16

Only one Pearson correlation coefficient for Case Group 16 data is significant at the 0.10 level (2-tailed) (see Table 23). It is a very strong positive correlation between SP Count and Ttl Msg ($r = .901, p = .037$). The remaining variables show no significant correlation to grade.

Table 23

Pearson Correlation Coefficients for Case Group 16

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.901 **	.037 **
Ttl Msg	Grade		.565
AF Count	Grade		.442
IN Count	Grade		.404
CO Count	Grade		.706
SP Count	Grade		.689
AF Percent	Grade		.924
IN Percent	Grade		.597
CO Percent	Grade		.363
AF Ratio	Grade		.996
IN Ratio	Grade		.674
CO Ratio	Grade		.445
SP Ratio	Grade		.866

** Correlation is significant at the 0.05 level (2-tailed).

Correlation Results for Case Group 17

For Case Group 17, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 24). Very strong positive correlations are shown

between SP Count and Ttl Msg ($r = .973, p = .001$); as well as, between grade and CO Count ($r = .858, p = .029$), SP Count ($r = .831, p = .040$), IN Count ($r = .823, p = .044$), and Ttl Msg ($r = .822, p = .045$). A strong positive correlation is shown between grade and AF Count ($r = .744, p = .090$). The remaining variables show no significant correlation to grade.

Table 24

Pearson Correlation Coefficients for Case Group 17

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.973 ***	.001 ***
Ttl Msg	Grade	.822 **	.045 **
AF Count	Grade	.744 *	.090 *
IN Count	Grade	.823 **	.044 **
CO Count	Grade	.858 **	.029 **
SP Count	Grade	.831 **	.040 **
AF Percent	Grade		.785
IN Percent	Grade		.790
CO Percent	Grade		.933
AF Ratio	Grade		.605
IN Ratio	Grade		.943
CO Ratio	Grade		.746
SP Ratio	Grade		.884

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

Correlation Results for Case Group 18

For Case Group 18, the following Pearson correlation coefficients are significant at the 0.10 level (2-tailed) (see Table 25). Very strong positive correlations are shown between SP Count and Ttl Msg ($r = .927, p = .008$), and between grade and CO Percent ($r = .885, p = .019$). The remaining variables show no significant correlation to grade.

Table 25

Pearson Correlation Coefficients for Case Group 18

Independent Variable	Dependent Variable	r	p
Ttl Msg	SP Count	.927 **	.008 ***
Ttl Msg	Grade		.248
AF Count	Grade		.504
IN Count	Grade		.601
CO Count	Grade		.279
SP Count	Grade		.414
AF Percent	Grade		.648
IN Percent	Grade		.143
CO Percent	Grade	.885 **	.019 **
AF Ratio	Grade		.292
IN Ratio	Grade		.130
CO Ratio	Grade		.884
SP Ratio	Grade		.266

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

Correlation Interpretations

Addressing Assumptions of Total Messages with Grade and Social Presence

Fifteen of the 17 cases show no significant Pearson correlation coefficients between grade and total messages (Ttl Msg) (see Tables 9 to 25). The two cases that show correlation are Case Group 14 ($r = .819, p = .046$) and Case Group 17 ($r = .822, p = .045$). The fifteen cases that show no significant correlation at the 0.10 level include all the cases defined by gender and local regardless of the assigned presentation groups. It is reasonable to state that grade is not significantly correlated with the total MIM chat messages sent by learners. This supports the proposition that volume of messages sent by learners in an online course discussion is insufficient at predicting grade. This allows for the possibility that attributes of those messages may be of use in predicting grades of online learners.

The second proposition is tested by conducting Pearson's correlation analyses on the variables of total messages (Ttl Msg) and the total number of messages demonstrating a social presence indicator (SP Count). Each of the 17 pairs of variables shows significant correlation (see Table 26). At the significance level of 0.01, thirteen of the Pearson correlation coefficients are very strong and one is strong. Three of the correlations are very strong at the 0.05 level of significance. The direction is positive for all 17 correlations. With more sent messages, there are more conveyances of social presence. This allows for the statistical exploration of all three computational forms of data expressing social presence for this study called *count*, *percent*, and *ratio*.

Table 26*Correlation Between Total Messages and SP Count*

Case	r	p
All	.958 ***	.000 ***
Males	.958 ***	.000 ***
Females	.963 ***	.000 ***
Canada-based	.978 ***	.000 ***
Kenya-based	.842 ***	.001 ***
Thailand-based	.978 ***	.000 ***
Canada-based females	.976 ***	.001 ***
Kenya-based males	.852 **	.015 **
Thailand-based males	.986 ***	.000 ***
Thailand-based females	.973 ***	.000 ***
Group 11	.995 ***	.000 ***
Group 12	.967 ***	.002 ***
Group 13	.979 ***	.004 ***
Group 14	.965 ***	.002 ***
Group 16	.901 **	.037 **
Group 17	.973 ***	.000 ***
Group 18	.927 **	.001 ***

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

Impact of Excluded Cases

The three cases excluded from the correlation analysis phase are Group 15, Canada-based Males, and Kenya-based Females. The removal of Group 15 reduces the opportunity to compare this presentation group to other groups, while the data from the individual participants remains aggregated within the demographically defined cases. Descriptive data pertaining to Group 15 are included when groups are discussed in *Chapter Five*. The impact of removing this case is nominal to the statistical analysis.

The removal of the Canada-based males, and Kenya-based females, makes statistical comparisons based on both gender and locale together not possible. No conclusions can be made about gender differences for Canada-based learners, or Kenyan-based learners. No conclusions can be made about gender across the three locations. The impact of this is meaningful and the range of statistical analyses is lessened. The coded data from the learner's MIM messages in these two cases remains aggregated into the related cases based on demographics and group membership.

Impact of Using Significance Level to 0.10

It is necessary to revisit the decision to use the significance level to 0.10. This is done by considering what would be lost by using the significance level of 0.05. Overall, the total number of significant correlations would have been reduced from 58 to 42 (see Table 27). Of the 58 correlations 36 are very strong either positively or negatively, with 24 results showing a correlation above 0.85. "Prediction studies in education very rarely yield correlations" above 0.85 (Cohen et al., 2011, p. 637). Enthusiasm for these results is tempered by asking if the inclusion of these 24 correlations is too generous using $p < 0.10$. Notably, all 24 correlations have a p value of less than 0.05. Using the significant level of 0.10 does not affect the reliability of the statistically outputs showing the closest relationships between the variables correlated. These are statistically very useful to this study.

Table 27*Comparison of Results by Strength and p Value*

Strength	$p < .10$	$p < .05$
Very Strong (above 0.8)		
Above 0.85	24	24
From 0.8 to 0.85	12	8
Strong (from 0.5 to 0.8)	11	5
Moderate (from 0.3 to 0.5)	10	5
Modest (from 0.1 to 0.3)	1	0
Weak (below 0.1)	0	0
Totals	58	42

The impact of using $p < 0.10$ in this study is on the correlations below 0.85. There are 34 at this level, with 18 having a $p < 0.05$. The additional 16 correlations found using $p < 0.10$ vary in usefulness for predictions from very strong to modest (see the bold font entries in Tables 28 and 29). Applying the principle that combinations of correlation interpretations strengthen the outputs' usefulness in prediction studies (Cohen et al., 2011, p. 637), correlations are examined in relationship with other correlation outputs using the same form of data arbitrarily named for this study as *count*, *percent*, or *ratio*. Two factors are used to evaluate the usefulness of each of these additional 16 correlations. The first factor is how each of the 16 additional correlations informs the understanding of any single variable. The second factor is how each additional correlation supports the selection of data for regression analysis. Together, the two factors are used to interrogate whether the additional correlations identified at the significance level of 0.10 helps to establish a pattern with something observable in the correlations significant at the 0.05 level.

Table 28*Summary of Significant “Count” Correlations for Each Case*

Dependent Variable	SP Count	Grade	Grade	Grade	Grade	Grade
Independent Variable	Ttl Msg	Ttl Msg	AF Count	IN Count	CO Count	SP Count
All Class	.958 ***					
Males	.958 ***					
Females	.963 ***					
Canada-based	.978 ***		.672 *			
Kenya-based	.842 ***					
Thailand-based	.978 ***		-.381 *			
Canada-based Females	.976 ***					
Kenya-based Males	.852 **		.945 ***			
Thailand-based Males	.986 ***		-.515 *			
Thailand -based Females	.973 ***					
Group 11	.995 ***					
Group 12	.967 ***					
Group 13	.979 ***				.901 **	.841 *
Group 14	.965 ***	.819 **	.886 **		.817 **	.804 *
Group 16	.901 **					
Group 17	.973 ***	.822 **	.744 *	.823 **	.858 **	.831 **
Group 18	.927 **					

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

As shown in Table 28, the four additional correlations using the significance level of 0.10 for AF Count (for cases Canada-based, Thailand-based, Thailand-based Males, and Group 17) are inconsistent and do not support the two very strong positive AF Count correlations of Kenya-based Males ($p = .001$) and Group 14 ($p = 0.019$). None of these can be combined with other *count* variables to conduct a meaningful regression analysis for this study. The two additional correlations, SP Count for Group 13 and Group 14, are

aligned with the correlation for Group 17 ($r = .831$), yet the group cases cannot be considered for regression analysis due to small sample sizes. The inclusion of these four additional correlations neither helps nor hinders this study.

Table 29

Summary of Significant “Percent” and “Ratio” Correlations by Case

Dependent Variable	Grade	Grade	Grade	Grade	Grade	Grade	Grade
Independent Variable	AF % of SP	IN % of SP	CO % of SP	AF ratio	IN ratio	CO ratio	SP ratio
All Class	-.277 *		.456 ***			.453 ***	
Males	-.405 *		.539 **			.482 **	
Females						.413 *	
Canada-based		-.859 **				.810 **	
Kenya-based							
Thailand-based	-.481 **		.621 ***	-.386 *		.478 **	
Canada-based Females		-.833 **				.790 *	
Kenya-based Males							
Thailand-based Males	-.466 *		.699 ***			.680 ***	
Thailand-based Females	-.622 **			-.545 *			
Group 11							
Group 12		.894 **					
Group 13			.835 *			.826 *	
Group 14			.932 ***			.745 *	
Group 16							
Group 17							
Group 18			.885 **				

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.10 level (2-tailed).

As shown in Table 29, four of the 16 additional correlations pertain to *percent* variables. One is CO Percent for case Group 13 ($r = .835$). This is aligned with the six other significant correlations for CO Percent. Three additional correlations pertain to AF percent. They are for cases All ($r = -.277$), Males ($r = -.405$), and Thailand-based Males ($r = -.466$). By including these correlations, each of these cases has the same pair of variables (AF Percent and CO percent) as the Case Thailand-based. When viewed together these additional correlations turn a single observation (from Case Thailand-based) into a pattern across four cases, supporting the selection to perform regression analyses on AF Percent and CO Percent for these four cases.

Two of the additional correlations involve AF Ratio (see Table 29). Since these are the only two significant correlations, no correlations would have been reported for this variable had the significance level be 0.05. This lessens the usefulness of these correlations, and they are not used to make further decisions of interpretation nor inclusion in regression analysis. Four additional correlations pertain to CO Ratio (Females, $r = .413$; Canada-based Females, $r = .790$; Group 13, $r = .826$; Group 14, $r = .745$). These show a positive correlation with grades, as do five other cases. The inclusion of these four additional correlations strengthens the reliability of predictive interpretations based on the correlation between CO Ratio and grade.

The choice to use the significance level of 0.10 is purposeful. To include the additional correlation outputs warrants considerable evaluation of the impact. None of the additional correlations are used as sole support of a correlation interpretation or decision to progress to regression analysis. These additional correlations are used to support statistically meaningful interpretations of observations that are found in the

correlation outputs that are significant at the 0.05 level. Using the significant level of 0.10 does not affect the reliability of the statistically outputs and allows for the inclusion of results to more fully identify patterns of observations in this study. The results as presented are useful.

Correlations Summary

Two correlation analyses address underlying presumptions of this study. The first analysis shows no significant correlation between total mobile instant messages sent by learners in an online course discussion forum (Ttl Msg) and those learners' final grade (Grade). The second analysis is statistically very significant and shows a very strong positive correlation between the total mobile instant messages sent and the total number of messages demonstrating a social presence indicator. These two correlation analyses favourably confirm the continuation of the quantitative portion of this study.

Nine cases show a positive correlation between CO Ratio and grade. Four of the cases have a Pearson correlation coefficient between 0.413 and 0.482. Cohen et al. (2011) caution against the use of correlations of this strength alone and recommend combining them with other correlations within regression analysis. There are no statistically significant correlations to combine with any of these four, so they are not used further. Five of the cases are strong enough to use for predictions. These are the only patterns to emerge strong enough to make predictive interpretations directly from Pearson correlation coefficient.

In pursuing demonstrations of social presence that might be both predictive of academic performance in the form of final grade and humanly perceptible, these five cases are examined closely at the original coding level of individual social presence

indicators. The learners' data from the five cases are aggregated into one set of learners. Six duplicates are removed because the learners are represented in more than one of the five cases. This set is then split between learners earning 85% or higher in their final grade ($n = 13$), and learners earning a grade less than 85% ($n = 10$). The mean average of each cohesive indicator divided by the total messages sent for that set are calculated and named CO1-Ratio, CO2-Ratio, and CO3-Ratio (see Table 30). Out of the three calculations based on the cohesive indicators, two have little differentiation between the two subsets. Learners with a grade of 85% and higher uses vocatives (e.g. communications addressing or referring to personal names of other people in the mobile instant messaging online course discussions) in 20% of their total sent messages in the course, whereas the learners with a grade below 85% do so in 21% of their messages (CO1 Ratio). The rate of use of phatic communications, which serves as a purely social function, such as greetings and closures, is identical between the two subgroups, appearing in 12% of the messages (CO3 Ratio). The notable difference is in the use of inclusive pronouns, addresses, or references to the group as we, us, our, group. Learners with a grade of 85% or higher used group references in 28% of their total sent messages, whereas the learners with grades below 85% do so only in only 15% of their messages (CO2 Ratio). This study investigates correlation not causation. The findings at this stage are that if less than a approximately a quarter of messages sent by a learner contained group cohesive expressions, such as inclusive pronouns and references to the group, then this may be a predictor of low academic performance for that learner.

The *percent* form of data renders significant correlations between multiple variables in four cases. The cases, called All, Males, Thailand-based, and Thailand-based

Males, show significant correlations between grade and AF Percent, while also between grade and CO Percent. These are chosen for regression analysis in order to understand the relationship of these correlations, and identify any multi-collinearity issues.

Table 30

Learners from Cases with Correlations Between CO Ratio and Grade.

Subset by Grade	n	CO1-Ratio	CO2-Ratio	CO3-Ratio
Learners with grade of 85% and up	13	20%	28%	12%
Learners with a grade below 85%	10	21%	15%	12%

Note. This set is made up of learners' data from five cases, after six duplicates were removed. The five cases are Canada-based, Canada-based Females, Thailand-based Males, Group 13, and Group 14.

Regression Analyses

Regression Results for Case All

A summary of the key statistical information pertaining to Case All is found in Table 31. Discussion of the regression analysis is presented in two parts the first pertaining to the fit of data to this analysis; the second, the outcome interpretations. The ANOVA significance value ($p = 0.006$) shows that this model, with the variables AF Percent and CO Percent, is statistically significant to predict final grade for this case of learners. The adjusted R square (0.190) shows that 19.0% of the variance in the grade is explained by these two independent variables. Multi-collinearity is nominal between AF Percent and CO Percent ($VIF = 1.106$), supporting the usefulness of this regression analysis. The residuals are approximately normally distributed as shown in the histogram, and P-P plot (see Figure 9) and within the acceptable range of ± 3 , as the

standard residual statistics are -1.966 (Minimum) and 2.400 (Maximum). Figure 9 also depicts homoscedasticity of the data contributing to the conclusion that the data meet the assumptions for conducting regression analysis.

Table 31

Key Regression Statistics for Case All

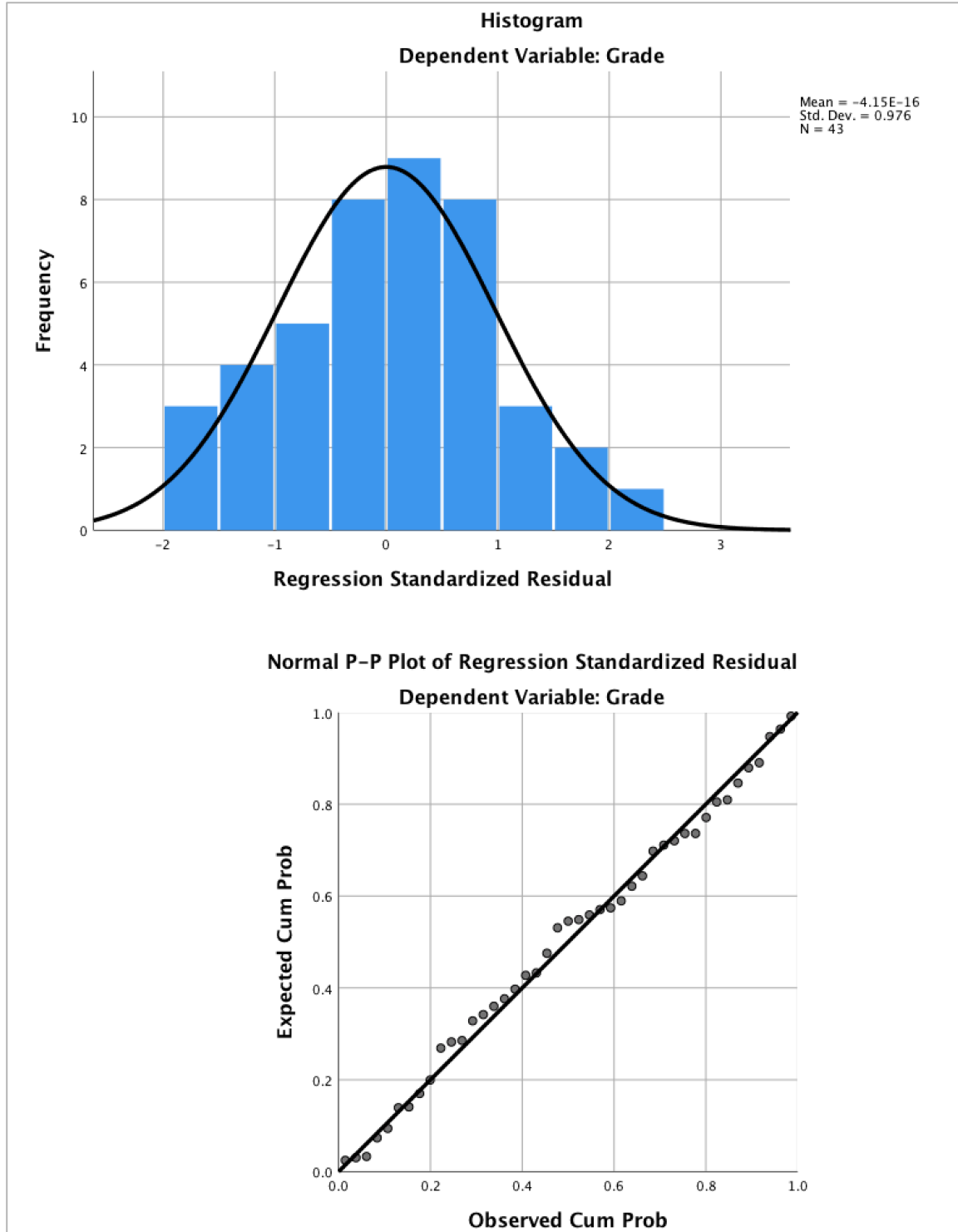
Type of Statistic	Model	Grade	AF Percent	CO Percent
n		43	43	43
Mean		80.349	21.266%	34.048%
Standard Deviation		8.0286	8.7866%	11.7619%
Adjusted R Square	.190			
ANOVA Sig.	.006 ***			
Std. Residual (Min.)	- 1.966			
Std. Residual (Max.)	2.400			
Statistics VIF			1.106	1.106
Coefficient Constant B	73.754			
Unstandardized B			- .137	.279
Standardized β			- .150	.409
Coefficient Sig.			.310	0008 ***

*** Value is significant at the 0.01 level.

The standardized Beta (β) values show the relative weightings on the dependent variable grade by the two independent variables relative to each other. For Case All, the independent variable CO Percent is the strongest positive predictor ($\beta = 0.409$) of the final grade and is statistically significant (at 0.008, $p < 0.05$). The independent variable AF Percent is a negative predictor ($\beta = - 0.150$) of the final grade and is statistically insignificant (at 0.310, $p > 0.05$).

Figure 9

Case All: Regression Histogram and P-P Plot



While the ANOVA significance value shows that this model is statistically significant, the ability of either independent variable to predict the dependent variable grade is a separate matter. The significance values reported with the individual coefficients identify that for Case All learners, the CO Percent variable can be used alone to predict final grade but AF Percent cannot. The usefulness of AF Percent to predict final grade is by understanding it in conjunction with CO Percent. The regression formula for all four cases is:

$$\text{Predicted Grade} = (B_{AF\%} \cdot AF\%) + (B_{CO\%} \cdot CO\%) + \text{Coefficient Constant}$$

The Unstandardized Beta (B) values for AF% and CO% are represented by $B_{AF\%}$ and $B_{CO\%}$ respectively. These values and the coefficient constant vary by case and are derived from the regression analysis. The regression equation for Case All is:

$$\text{Predicted Grade} = (-.137 \cdot AF\%) + (.279 \cdot CO\%) + 73.754$$

From the standardized Beta (β) values it is calculated that for every increase of 8.7866 in AF Percent there is a decrease of 1.20 in grade. The decrease is calculated by multiplying standardized Beta (β) for AF Percent (-.150) by the standard deviation for grade for this case's population (8.0286) then rounding to the correct significant figures, which is three digits for each of the four cases used in the regression analysis. For every increase of 11.7619 in CO Percent an increase of 3.28 in grade is similarly calculated.

Regression Results for Case Males

Table 32 summaries the key statistical information for Case Males . The ANOVA significance value ($p = 0.016$) shows that this model, with the variables AF Percent and CO Percent, significantly predicts final grade. The adjusted R square (0.286) shows that 28.6% of the variance in the grade is explained by these two independent variables.

Multi-collinearity is nominal between AF Percent and CO Percent (VIF = 1.103). The residuals are approximately normally distributed as shown in the histogram, and P-P plot (see Figure 10) and by the standard residual statistics of -2.012 (Minimum) and 1.379 (Maximum). Figure 10 also depicts homoscedasticity of the data. Together these show the data meet the assumptions for conducting regression analysis.

The independent variable CO Percent is the strongest positive predictor ($\beta = 0.458$) of the final grade and is statistically significant (at 0.029, $p < 0.05$). The independent variable AF Percent is a negative predictor ($\beta = - 0.265$) of the final grade and is statistically insignificant (at 0.188, $p > 0.05$). The significance values reported with the individual coefficients identify that for Case Males, the CO Percent variable can be used alone to predict final grade but AF Percent cannot. The usefulness of AF Percent to predict final grade is by understanding it in conjunction with CO Percent.

Table 32

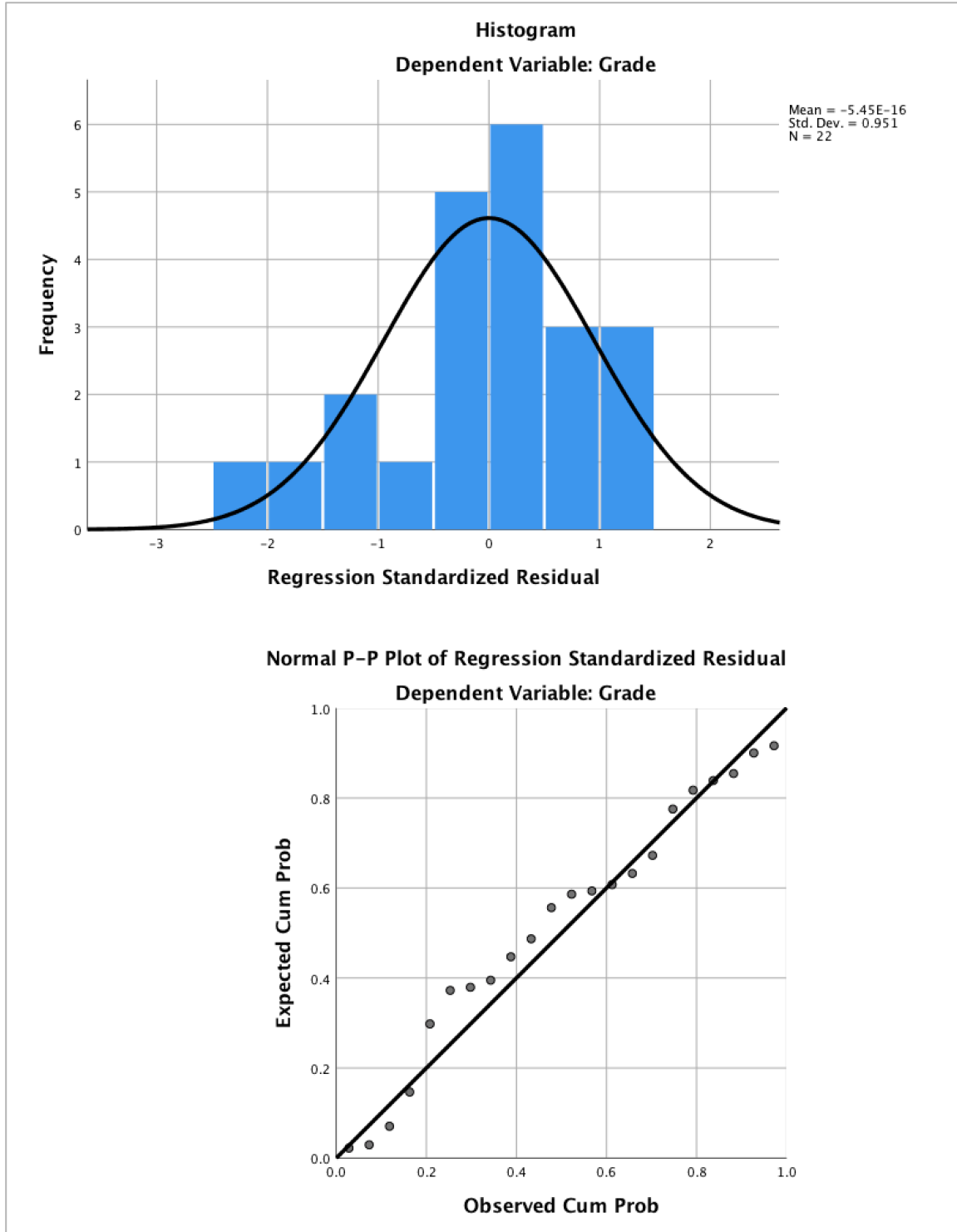
Key Regression Statistics for Case Males

Type of Statistic	Model	Grade	AF Percent	CO Percent
n		22	22	22
Mean		79.545	21.086%	31.830%
Standard Deviation		8.0784	11.0872%	14.4301%
Adjusted R Square	.286			
ANOVA Sig.	.016 **			
Std. Residual (Min.)	- 2.012			
Std. Residual (Max.)	1.379			
Statistics VIF			1.103	1.103
Coefficient Constant B	75.195			
Unstandardized B			- .193	.256
Standardized β			- .265	.458
Coefficient Sig.			.188	.029 **

** Value is significant at the 0.05 level.

Figure 10

Case Male: Regression Histogram and P-P Plot



The unstandardized Beta (B) values and the coefficient constant are used to create the following regression equation for Case Males:

$$\text{Predicted Grade} = (-.193 \bullet \text{AF}\%) + (.256 \bullet \text{CO}\%) + 75.195$$

From the standardized Beta (β) values it is calculated that every increase of 11.0872 in AF Percent there is a decrease of 2.14 in grade. The decrease is calculated by multiplying standardized Beta (β) for AF Percent (-.265) by the standard deviation for grade for this case's population (8.0784) then rounding to the correct significant figures. For every increase of 14.4301 in CO Percent an increase of 3.70 in grade is similarly calculated.

Regression Results for Case Thailand-Based

A summary of the key statistical information pertaining to Case Thailand-based is found in Table 33. The ANOVA significance value ($p = 0.000$) shows that this model, with the variables AF Percent and CO Percent, is statistically very significant to predict final grade for Case Thailand-based learners. The adjusted R square (0.459) shows that 45.9% of the variance in the grade is explained by these two independent variables. Multi-collinearity is nominal between AF Percent and CO Percent ($\text{VIF} = 1.059$), supporting the usefulness of this regression analysis. The residuals are approximately normally distributed as shown in the histogram, and P-P plot (see Figure 11) and by the standard residual statistics of -1.913 (Minimum) and 1.729 (Maximum). Figure 11 also depicts homoscedasticity of the data contributing to the conclusion that the data meet the assumptions for conducting regression analysis.

Table 33*Key Regression Statistics for Case Thailand-based*

Type of Statistic	Model	Grade	AF Percent	CO Percent
n		25	25	25
Mean		82.500	21.620%	34.558%
Standard Deviation		6.9222	9.9707%	14.0381%
Adjusted R Square	.459			
ANOVA Sig.	.000 ***			
Std. Residual (Min.)	- 1.913			
Std. Residual (Max.)	1.729			
Statistics VIF			1.059	1.059
Coefficient Constant B	78.666			
Unstandardized B			-.246	.265
Standardized β			-.354	.537
Coefficient Sig.			.032 **	.002 ***

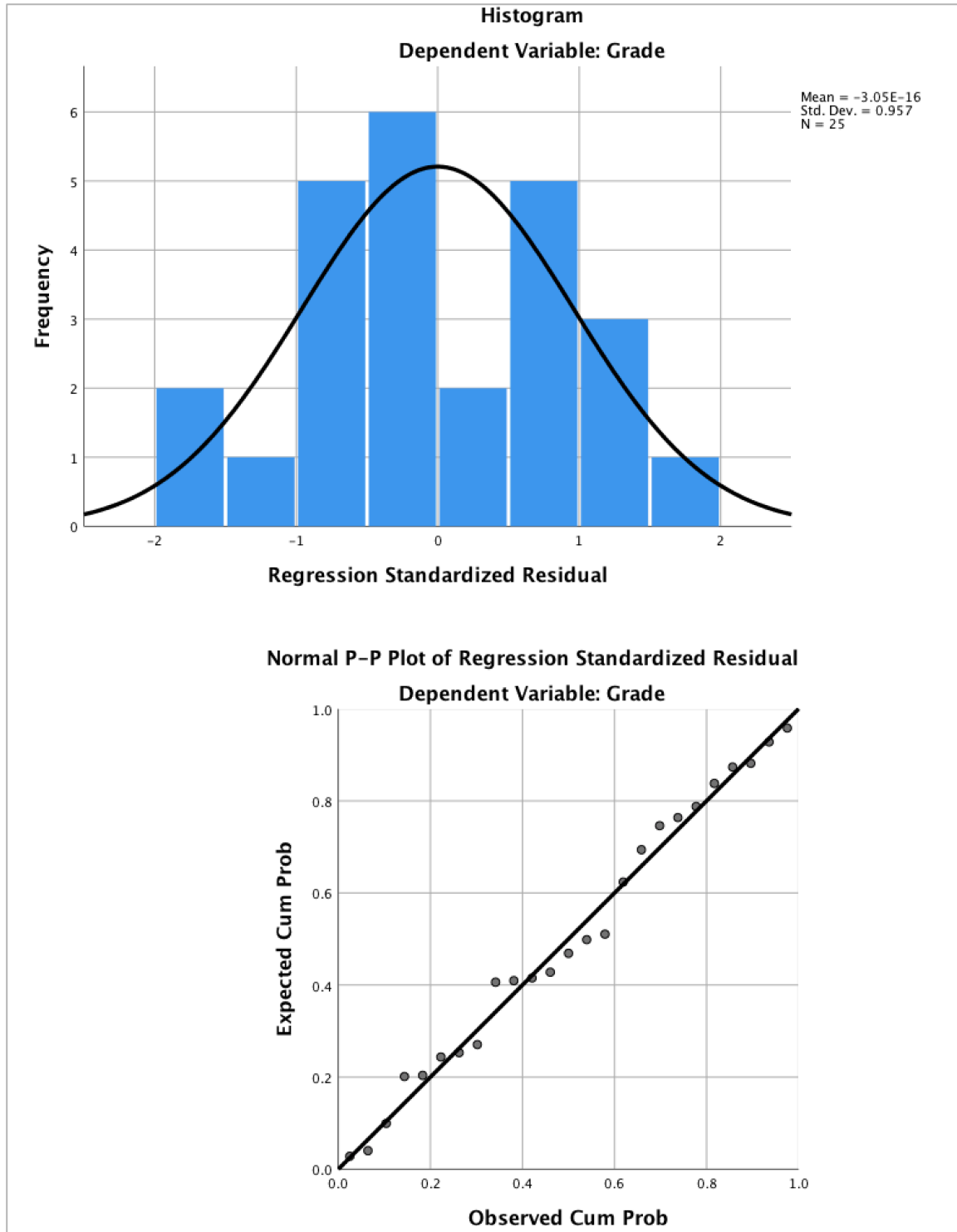
*** Value is significant at the 0.01 level.

** Value is significant at the 0.05 level.

The independent variable CO Percent is the strongest positive predictor ($\beta = 0.537$) of the final grade and is statistically significant (at 0.002, $p < 0.05$). The independent variable AF Percent is a negative predictor ($\beta = -0.354$) of the final grade and is statistically significant (at 0.032, $p < 0.05$). The significance values reported with the individual coefficients identify that for Case Thailand-based learners, CO Percent and AF Percent each can be used alone to predict final grade.

Figure 11

Case Thailand-Based: Regression Histogram and P-P Plot



The unstandardized Beta (B) values and the coefficient constant are used to create the following regression equation for Case Thailand-based:

$$\text{Predicted Grade} = (-.246 \cdot \text{AF}\%) + (.265 \cdot \text{CO}\%) + 78.666$$

From the standardized Beta (β) values it is calculated that every increase of 9.9707 in AF Percent there is a decrease of 2.54 in grade. The decrease is calculated by multiplying the standardized Beta (β) for AF Percent (-.354) by the standard deviation for grade for this case's population (6.9222) then rounding to the correct significant figures. For every increase of 14.0381 in CO Percent, grade is similarly calculated to increase by 3.71.

Regression Results for Case Thailand-Based Males

The ANOVA significance value ($p = 0.008$) shows that this model, with the variables AF Percent and CO Percent, is statistically significant to predict final grade for this case (see Table 34). The adjusted R square (0.509) shows that 50.9% of the variance in the grade is explained by these two independent variables. Multi-collinearity is nominal between AF Percent and CO Percent ($\text{VIF} = 1.060$), supporting the usefulness of this regression analysis. The residuals are approximately normally distributed as shown in the histogram, and P-P plot (see Figure 12) and by the standard residual statistics of -1.901 (Minimum) and 1.282 (Maximum). Figure 12 also depicts homoscedasticity of the data contributing to the conclusion that the data meet the assumptions for conducting regression analysis.

The independent variable CO Percent is the strongest positive predictor ($\beta = 0.624$) of the final grade and is statistically significant (at 0.010, $p < 0.05$). The independent variable AF Percent is a negative predictor ($\beta = -0.318$) of the final grade and is statistically insignificant (at 0.141, $p > 0.05$). The significance values reported

with the individual coefficients identify that for Case Thailand-based Males, CO Percent can be used alone to predict final grade but AF Percent cannot. AF Percent in conjunction with CO Percent can be used to predict final grade.

The unstandardized B values and the coefficient constant are used to create the following regression equation for Case Thailand-based Males:

$$\text{Predicted Grade} = (-.188 \cdot \text{AF}\%) + (.268 \cdot \text{CO}\%) + 77,435$$

From the standardized (β) values it is calculated that every increase of 12.6208 in AF Percent there is a decrease of 2.37 in grade. The decrease is calculated by multiplying the standard Beta (β) for AF Percent (-.318) by the standard deviation for grade for this case's population (7.4587) then rounding to the correct significant figures. For every increase of 17.3409 in CO Percent an increase of 4.65 in grade is similarly calculated.

Table 34

Key Regression Statistics for Case Thailand-based Males

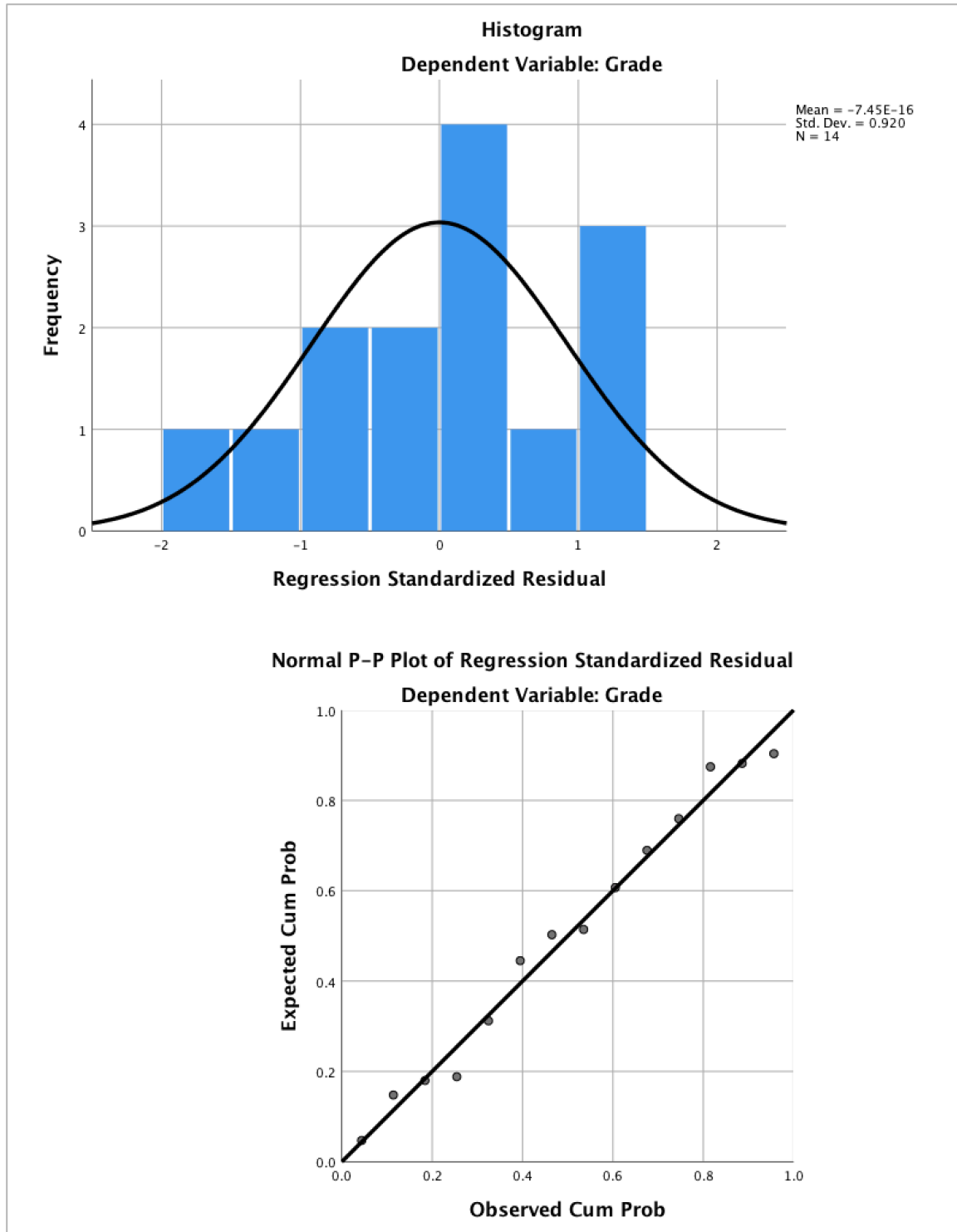
Type of Statistic	Model	Grade	AF Percent	CO Percent
n		14	14	14
Mean		82.143	21.575%	32.650%
Standard Deviation		7.4587	12.6208%	17.3409%
Adjusted R Square	.509			
ANOVA Sig.	.008 ***			
Std. Residual (Min.)	- 1.901			
Std. Residual (Max.)	1.282			
Statistics VIF			1.060	1.060
Coefficient Constant B	77.435			
Unstandardized B			- .188	.268
Standardized β			- .318	.624
Coefficient Sig.			.141	.010 **

*** Value is significant at the 0.01 level.

** Value is significant at the 0.05 level.

Figure 12

Case Thailand-Based Males: Regression Histogram and P-P Plot



Chapter Four Summary

Table 35 reports the summary of the regression analysis for the four populations as previously presented in this chapter. Broadly speaking, each of the four is a statistically significant regression analysis, has no multi-collinearity issues, and shows AF % as a negative predictor of the dependent variable grade while CO % is a positive predictor.

Table 35

Summary of Regression Results for the Four Population Samples

Case	n	Adj. R Sq.	Sig.	VIF	AF% of SP		CO% of SP	
					Std. Beta	Sig.	Std. Beta	Sig.
All	43	0.19	.006 ***	1.106	-.150	0.31	0.409 ***	0.008
Males	22	0.286	.016 **	1.103	-.265	0.188	0.458 **	0.029
Thailand-based	25	0.459	.000 ***	1.059	-.354 **	0.032	0.537 ***	0.002
Males (Thailand-based)	14	0.584	.008 ***	1.060	-.318	0.141	0.624 ***	0.01

Note. Dependent variable is final grade.

*** Denotes value is significant at the 0.01 level.

** Denotes value is significant at the 0.05 level.

As stated in the correlation findings, this study pursues findings of statistical interest that are perceptible to an instructor designing or facilitating online course discussion forums in which some of the learners are persons of concern. A set is created to use the regression analysis findings, cases, and variables to investigate further interpretations at the indicator level of social presence. The four cases are All, Males, Thailand-based, and Thailand-based Males. Removing duplicates meant the set is the

same as Case All. Similar to the set created to investigate the very strong correlation results for CO Ratio, this regression set is split into two subsets, by grade using 85% as the cut off. There are 21 learners who earned a final grade at or above 85%, and 22 earned a grade below 85% (see Table 36).

Table 36

Case All: Indicators of the Two Variables Predictive of Grade.

Subset by Grade	n	AF1-%	AF2-%	AF3-%	CO1-%	CO2-%	CO3-%
Learners with grade of 85% and up	21	7%	0%	12%	13%	17%	11%
Learners with a grade below 85%	22	8%	1%	15%	13%	10%	6%

For each subset, the total messages conveying affective and cohesive indicators are totaled separately and then divided by the total messages demonstrating social presence (SP Count) for that subset. They are named AF1 Percent, AF2 Percent, AF3 Percent, CO1 Percent, CO2 Percent, and CO3 Percent (see Table 36). Out of the six calculations based on the affective and cohesive indicators, three have little differentiation between the two subsets. They are AF1 – expressions of emotion through conventional or unconventional expressions such as emoticons, repetitious punctuation, or memes, AF2 – expressing humor, and CO1 – use of vocatives, such as personal names, each divided by SP Count labeled AF1 Percent, AF2 Percent, CO1 Percent respectively.

The notable difference is in the remaining three calculations. One is the percentages of total social presence messages sent which contain learners’ self-disclosures of life outside of class (AF3 Percent). For the learners with a grade of 85% or

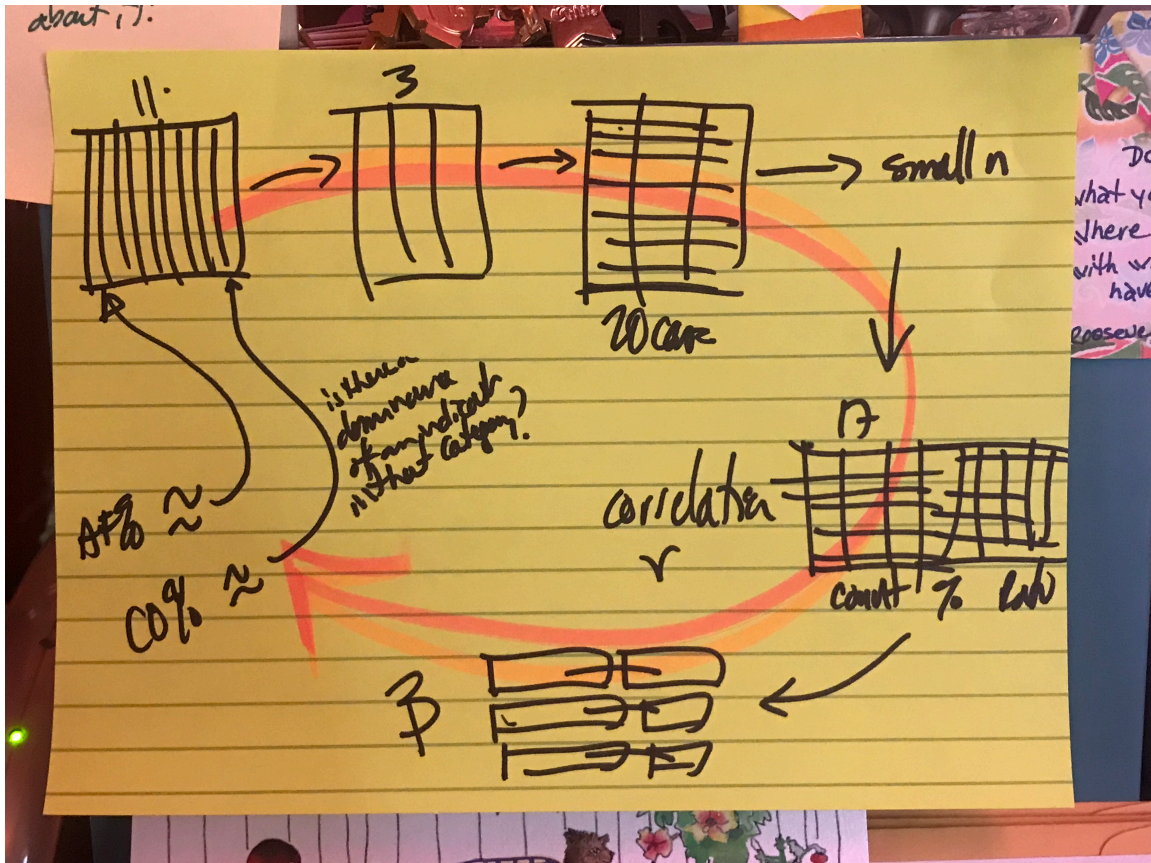
higher, their AF3 Percent is 12%, while those with a grade below 85% shows a higher AF3 Percent at 15%. For the top half of the class CO2 Percent (using inclusive group references) is 17%, and CO3 Percent (using phatic expressions) is 11%: while for the bottom half of the class these are considerably lower at 10% and 6 % respectively. The regression analysis shows that AF Percent and CO Percent together in these models are reliable predictors of grade for this population. An increase of AF Percent predicts a decrease in final grade; and an increase in CO Percent, an increase grade. The exact weight of each varies by the case population. Descriptively parsing these factors into the original coded social presence indicators leads to the identification of three differentiations between learners' messages. In practical terms, learners achieving grades of 85% or higher expressed less self-disclosure and more group references and phatic messages as a percentage of the total messages sent expressing social presence than learners who earn grades of less than 85%. The next chapters will discuss the implications of the correlation and regression findings.

Reflection on Quantitative Data Collection and Analysis

Figure 13 is a photo of an illustration that hung in my workspace during and after the data analysis phase of this research. I choose not to crop out of the photo the other visual objects that motivate me as I work at my computer in my home, because I want to depict the illustration in situ. The illustration is my short-hand for making sense of the life cycle of the quantitative data coding and analysis.

Figure 13

Life Cycle of Quantitative Data Coding and Analysis.



I started with coding what was observable, the learners' WhatsApp chat messages for 11 indicators of social presence. These were aggregated into their three respective social presence categories. From the research question and sub-questions, 20 cases were identified to analyze. The cases with samples too small for statistical analysis were removed, leaving 17 cases. Correlation analyses were performed on the remaining 17 cases, using three combinations of the data, which this study called count, percent, and ratio. From this, four cases and two variables were identified as fit for regression

analysis. The regression analysis findings rendered formulas for using two variables to predict the final grade of learners in this course. Wanting to tie this work back to something that was observable, I took those two variables from the significant regression analysis, and returned to the data originally coded for the 11 indicators, in order to identify details that could be perceptible to an educator teaching a class in which some of the learners were persons of concern. This illustration helped me to resolve the theory and practice of correlation and regression analysis for the data of this study. Subsequently, it kept me grounded while performing hundreds of SPSS tasks. Figure 13 is one example of how I used numbers, words, and visual art to make sense of this study. *Chapter Five* elaborates more on this throughout the study.

Chapter 5. Qualitative Results

As this chapter draws on my account of this study, I have selected first-person reflections that contribute critical or challenging views without being self-absorbed. To maintain a fluidity in reading, I used first-person to refer to reflexivity of my practice, and continued to use third-person when making a statement about the study. This is the chapter in which these two become most intertwined with the art that I produced during the journey of creating this dissertation.

As with any project, some steps can be concurrent, while others must be sequential. My first impulse in writing this chapter was to divide it into parts, one for each of the research questions. When I did this, the chapter read as a disconnected narrative because it lost the interconnected steps of designing, conducting, and disseminating this study. The chapter has been reorganized to follow chronologically as I experienced this action research.

The seed of this dissertation started during a leadership in distance education course in the Doctor of Education program at Athabasca University in January 2014. When asked to consider areas of innovation for distance education, I wondered about the areas in which it is a preferable mode of education to face-to-face. I described these areas as contexts in which it is harmful to the learner or instructor to attend in person. My examples included threat of communicable diseases. At the time I named Ebola virus, but in 2020 I could name the novel coronavirus COVID-19. My examples also included the threat of violence in conflict zones and the threat of physical harm in areas following natural disasters. Four years later, and six months after I collected the data for this study, the *Global Compact on Refugees* explicitly named the use of online education as an

innovative method “to meet the specific education needs of refugees” to overcome obstacles of safety for learners, including gender-based safety (United Nations General Assembly, 2018, p. 13). In 2014, I shifted my dissertation topic to higher education in emergencies, and began exploring the related theories, the practical concerns, and my personal position on providing distance higher education to persons of concern, such as refugees, internally displaced persons, asylum seekers, stateless persons, and returnees.

Figure 14

Refugee Inspired Reflective Art

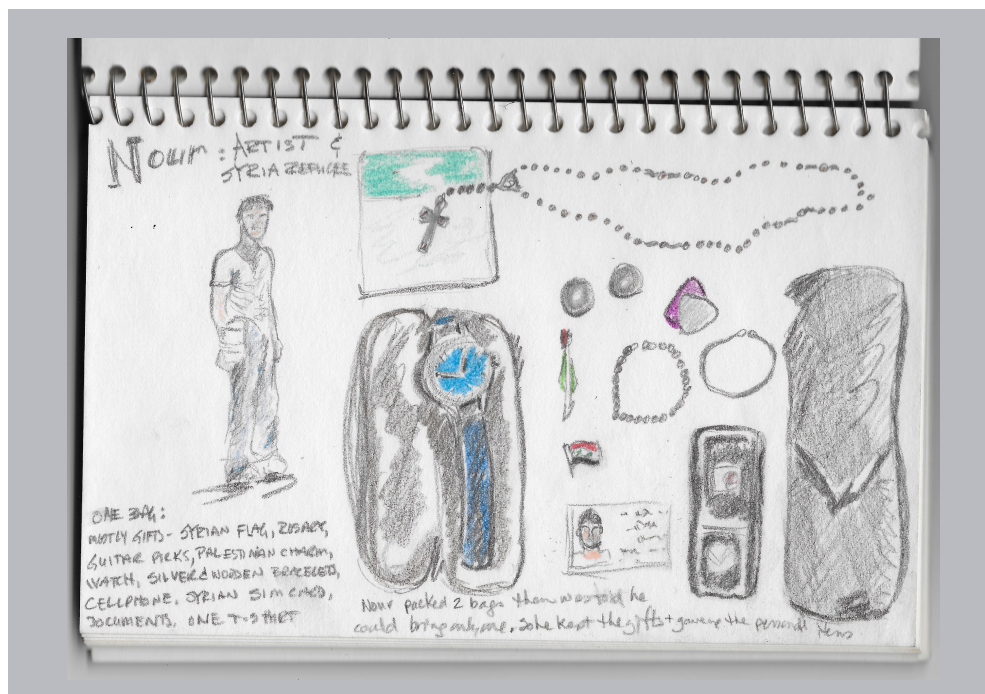


One of the ways I explored my self-awareness within this area of research was through the creation of visual art. In February 2016, well before I had access to a

population that I could study for this dissertation, I enrolled in an art-creation MOOC, called *28 to Make*. The course set out one visual challenge per day for 28 days. I chose to focus my art in ways that allowed me to explore issues pertaining to persons of concern on a more personal level than my literature review research allowed. Figures 14 and 15 are two examples of my artwork during that month. The first is an example of fan art, for K'naan a Canadian musician who was formerly a Somali refugee, and performed at *Arabesque* a month long Arab arts and culture festival in Washington, DC. The swirls on the left hand side of my illustration are intended as a visual pun as their shape is called arabesque (see Figure 14).

Figure 15

Contents of One Syrian Refugee's Bag



The second illustration (Figure 15) is a pencil drawing of the contents of one Syrian refugee's bag, as documented by a news article published prior to February 2016 (I do not have a citation to the original article). The refugee, named Nour, in preparing to flee Syria during the current civil war, packed two bags. Before finally leaving the country, he was told he could only bring one small bag, so he got rid of most of his personal items and kept mainly the small gifts he had received, plus one t-shirt and his documents. Nour was a professional artist. Notably, he got rid of the tools of his trade and kept primarily small objects of personal rather than professional meaning, like a broken watch. His limited possessions included a mobile phone.

In the intervening years the importance of mobile phones to refugees would become more widely known in popular culture. In August 2017, the mobile game called *Bury Me, My Love* was released (Maurin, 2017). Played on mobile devices, this interactive fiction game mimics WhatsApp text communications between the player and a fictional Syrian refugee, named Nour, trying to reach Europe. In 2018, Behrouz Boochani's book, titled *No Friend but the Mountains: Writing from Manus Prison*, was published. The author wrote this book while detained as a refugee in Manus Prison. The book was written on a mobile phone and segments were sent outside the prison via WhatsApp to be translated and eventually published. It has since received significant literary awards, including the Victorian Premier's Literary Award in 2019 (State Library New South Wales, 2019). These two examples stand out in my mind because they vividly emphasize the popularity of WhatsApp in various refugee communities, and they add to the understanding of the cultural context in which my study would develop. As a result of the Syrian refugees to Europe, there was a significant amount of news coverage

of refugee issues, and I began to notice a growing amount of misinformation. To address this, I wrote a by-lined column on refugee issues and Canada in the *Athabasca Advocate* Newspaper (MacIsaac, 2016). I also led a team of refugee-background learners and educators in publishing an article on our study of the experiences of higher education by refugee-background learners (MacIsaac et al., 2020).

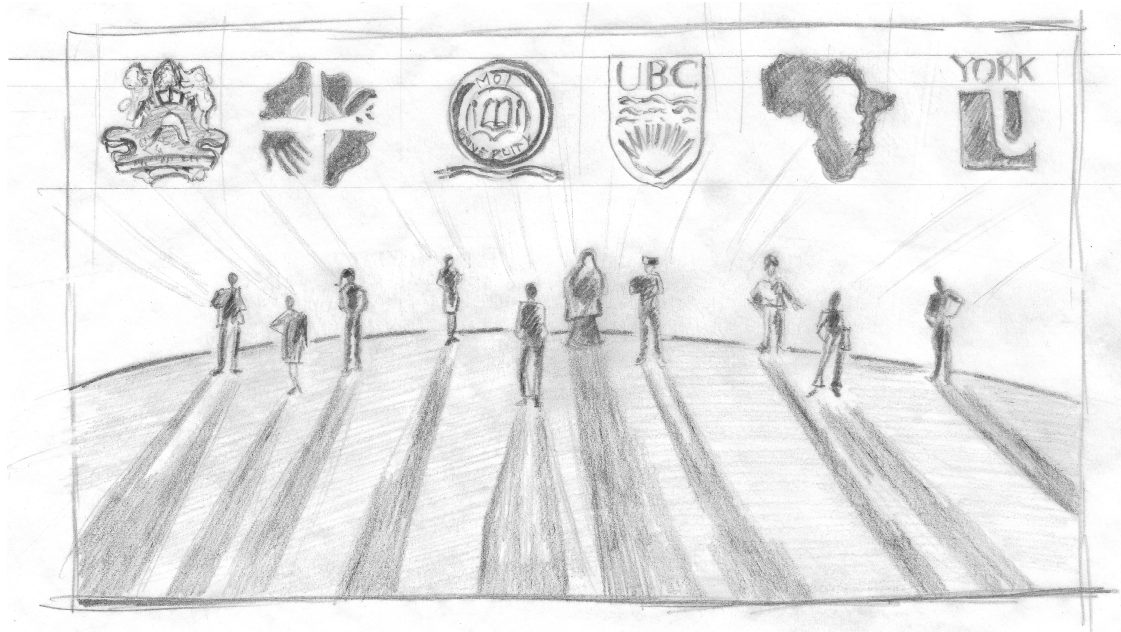
The previous three paragraphs set the scope of my interests external to my direct role in this doctoral study. I conducted this study from a predominantly White small town in rural northern Alberta, and consumed western English language news media. Both my coursework and my research have been conducted at a distance, where uninterrupted Internet and mobile communications have been my primary modes of communication with colleagues and study participants. I provide this as a snapshot of the point in history of this study, and my socio-linguistic limitations as the researcher. Understanding some of the cultural influences on me are important for understanding the milieu in which this dissertation study developed.

Origin of the Action

This chapter's organizational focus follows the chronology of the events, rather than the order in which the reflections were created. My reflections have been edited to provide a succinct yet complete account satisfying the goal set to improve practice through conducting research that follows the cycle of act, observe, and reflect using numbers, words, and visual art data. While *Chapter 4* details the statistical analysis, this chapter includes interrogation of the numeric data that do not meet the assumptions for statistical analysis.

Figure 16

Film Frame: BHER Program Partners



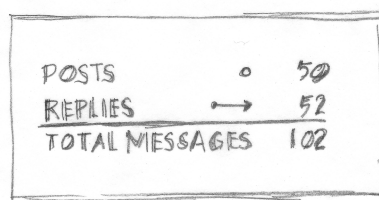
In November 2019, I presented a three-minute film introduction to my doctoral research in the form of a hand drawn parody of a comic book superhero movie trailer (MacIsaac, 2019). In this chapter of my dissertation, I reproduce some frames of the film to illustrate the development of the origin for this study's intervening action. Figure 16 depicts the partner organizations to the BHER through which the York course being studied is delivered to refugee learners outside of Canada. The course had been delivered before I became involved. I will layout three years of this course as it informs my study. The elements that remain the same between the three iterations of this course are (1) being an international multi-site class with refugee and non-refugee learners, (2) using Moodle, (3) having a graded group-presentation assignment, (4) and encouraging online discussion between the learner. The details of these elements change over the three years.

2016 Iteration of Course

The earliest data I accessed were from the 2016 iteration of the course in which the learners were refugees in Thailand not living in refugee camps, and non-refugees living in Canada. Each presentation assignment group was composed of learners from the same geographic area. The course used Moodle forums for online discussions between learners. I mapped every Moodle forum message.

Figure 17

Film Frame: Total Learner Online Messages in 2016 Course

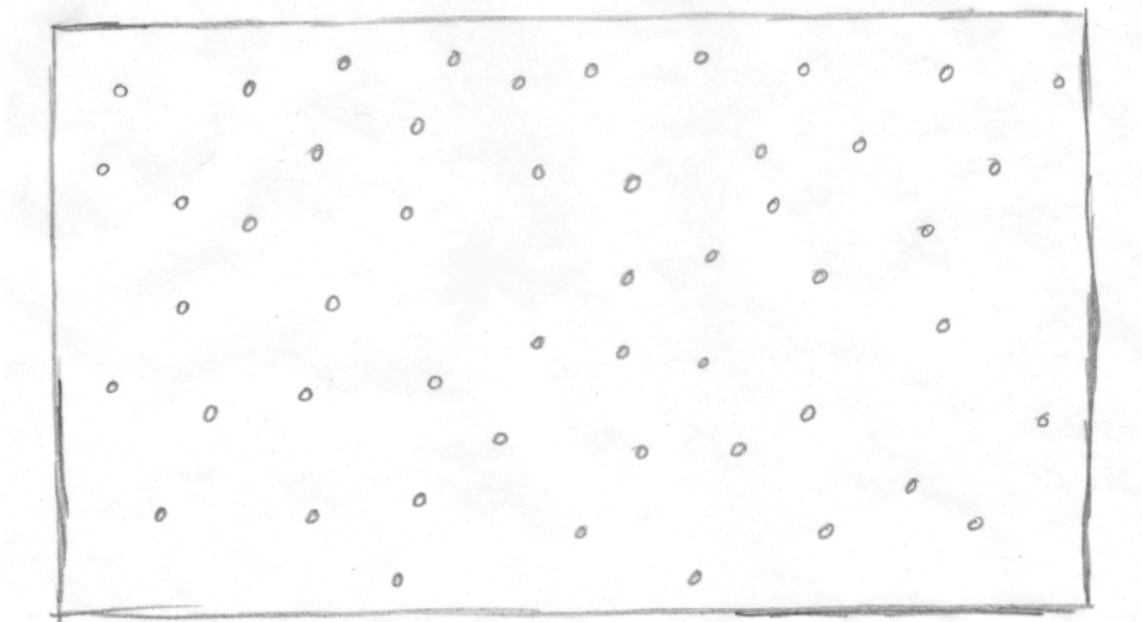


POSTS	o	50
REPLIES	→	52
TOTAL MESSAGES		102

There were 102 messages communicated in the Moodle forums for the 2016 iterations of the course, which had 78 learners. Figure 17 shows the legend for the images used in Figures 18 and 19. There were 50 messages posted to start a new discussion thread (see Figure 18). There were 52 replies to either post messages or reply messages (see Figure 19). An arrowhead identifies to which messages a reply was responding.

Figure 18

Film Frame: Learner Online Post Messages in 2016 Course

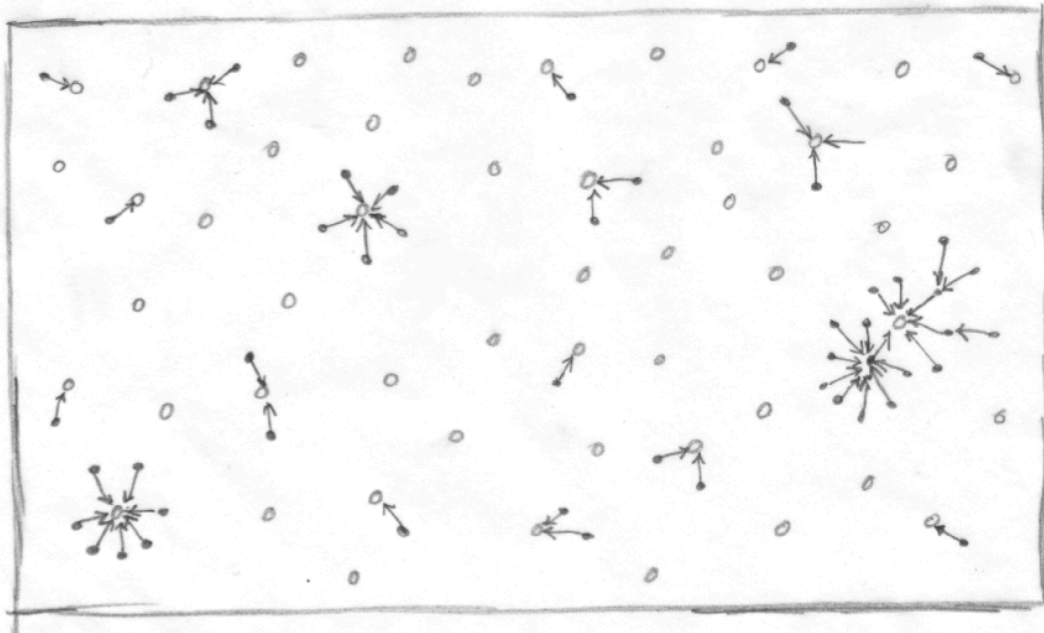


Of the 50 messages posted to start a discussion thread only 18 received replies (see Figure 19). Of those 18, half received just one reply, 4 received two replies, 2 received three replies, 1 had five replies, and 1 had seven replies. All of these replies were authored by learners living in the same locale as the learner who created the post. One post received two levels of replies generating 17 initial and subsequent replies and was the only one to receive replies from learners in both locales. This sample of 102 messages is insufficient in size for the type of statistical analysis sought in this study. But the graphic representation of the learner-to-learner communications does contribute to the understanding of the basis of this studies intervention. From the graphic image, it is clear that there was not substantial communication between learners. This was the

context in which the course professor, Dr. Don Dippo, asked me for input on ways to improve the online communication between learners in this course.

Figure 19

Film Frame: Learner Online Post and Reply Messages in 2016 Course



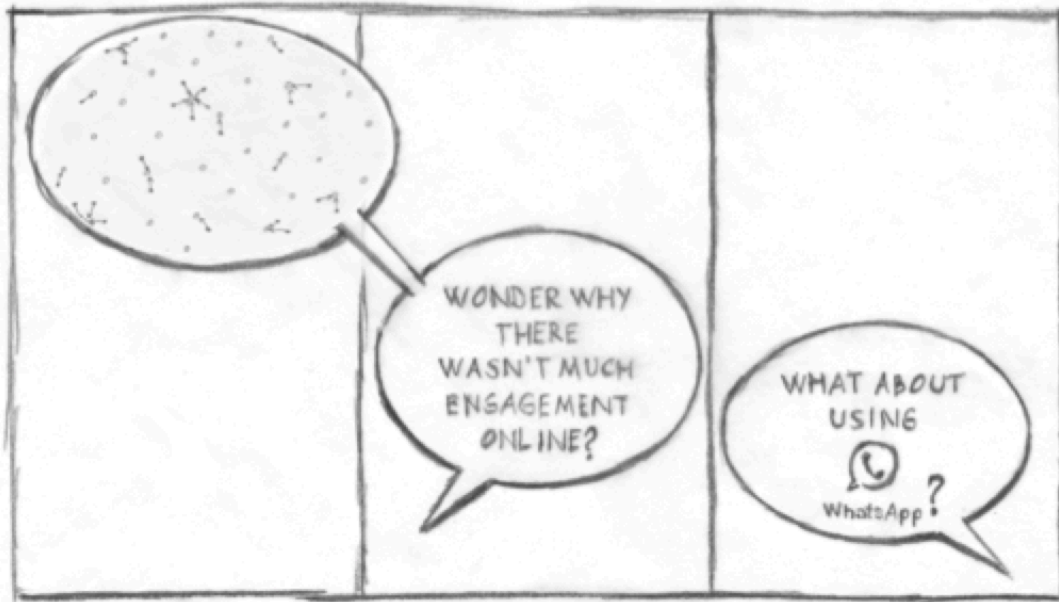
2017 Iteration of Course

In discussing with the course professor ways to foster more online communication in the 2017 iteration of this course, I pitched the idea of using WhatsApp. In my comic-book film introduction to this study, I sketched this in three-panels (see Figure 20). We both knew anecdotally that this mobile phone app was widely used by refugees in Dadaab Refugee Complex in Kenya. I also pitched building a series of single question polls within Moodle, with the intent for students to learn more about each other.

By formalizing the use of WhatsApp for the online course related discussions, the professor decided to change the composition of groups for the presentation assignment. The 2017 iteration of the course was the first time groups could feasibly be composed of learners from both locales, allowing for learners to collaborate internationally.

Figure 20

Film Frame: A Pitch to Improve Engagement Online



Ethical Approval to Study the Intervention of the 2017 Course

Four months after the 2017 iteration of the course, I gave three conference presentations on the experiences of this course (MacIsaac, 2017a, 2017b; MacIsaac & Doyle, 2017). I reflected on this 2017 case study through the lens of disruptive innovation that has three primary elements: (1) to bring new actors (2) into an existing

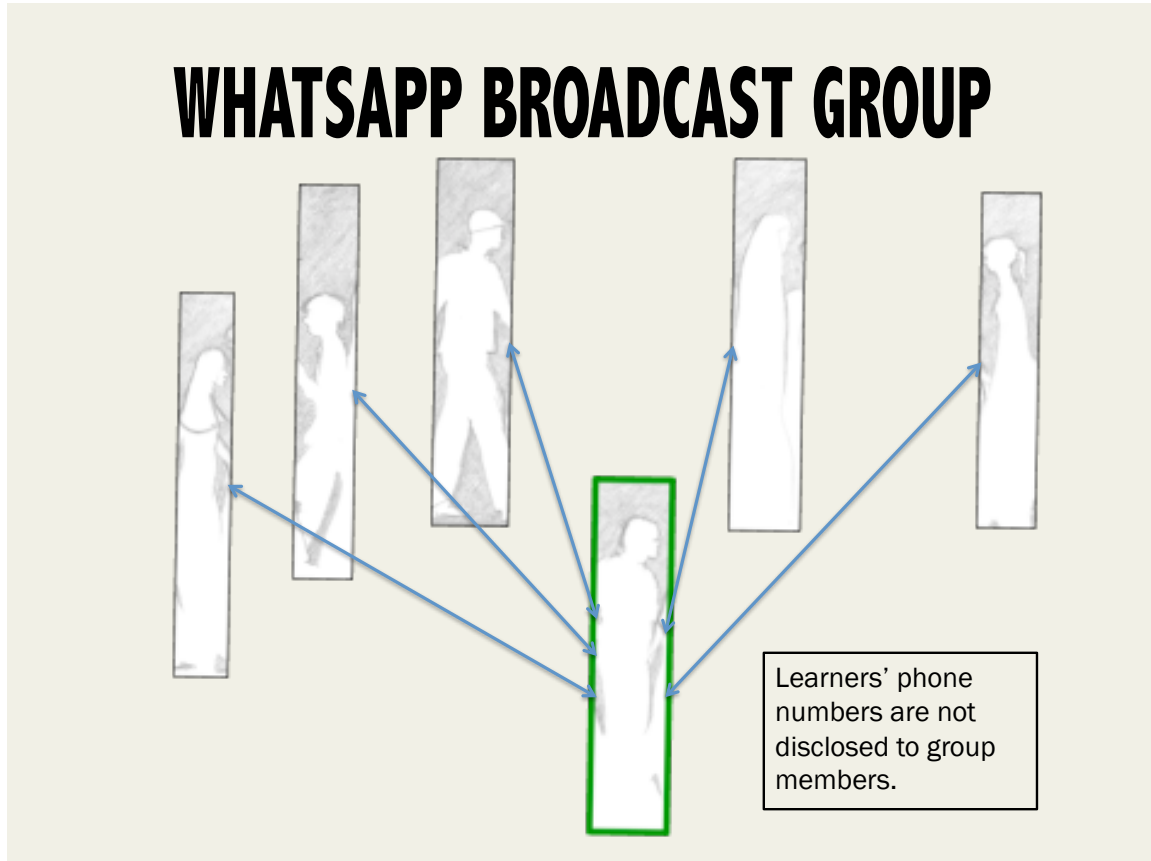
market (3) through innovation (Bower & Christensen, 1995; Christensen et al., 2015). The disruptive innovation was to adopt an existing mobile app that was widely used in the Kenyan refugee camps, to increase the number of learners engaged in meaningful course communications and collaborations in the 2017 course. This fulfilled the three core elements of disruptive innovation. In the abstract for one of those conference presentations, I wrote:

A secondary element of disruptive innovation is that the technology itself is often of a cheaper consumer price and a lesser quality than those primarily used in the market place. This is true for using WhatsApp for digital course discussions. It's significantly cheaper than the students paying for Internet data plans to access their learning management system Moodle. (MacIsaac, 2017a)

Having considered the potential impacts of using WhatsApp in this course, we applied for ethical approval to study this intervention. Proposing to move a course's online discussion to WhatsApp from Moodle was significant. The learning management system of Moodle protected the private information of the learners, such as their personal email addresses. Unfortunately, at the time, WhatsApp could protect private phone numbers of members in a group only if the group was created as a one-to-many broadcast style of communication, such as a WhatsApp group leader sending a message to all the group members at once, but then each member could reply only to the leader. In this structure learners are siloed from each other and have two-way communications only with a designated group leader (see Figure 21).

Figure 21

Communication Structure of WhatsApp Broadcast

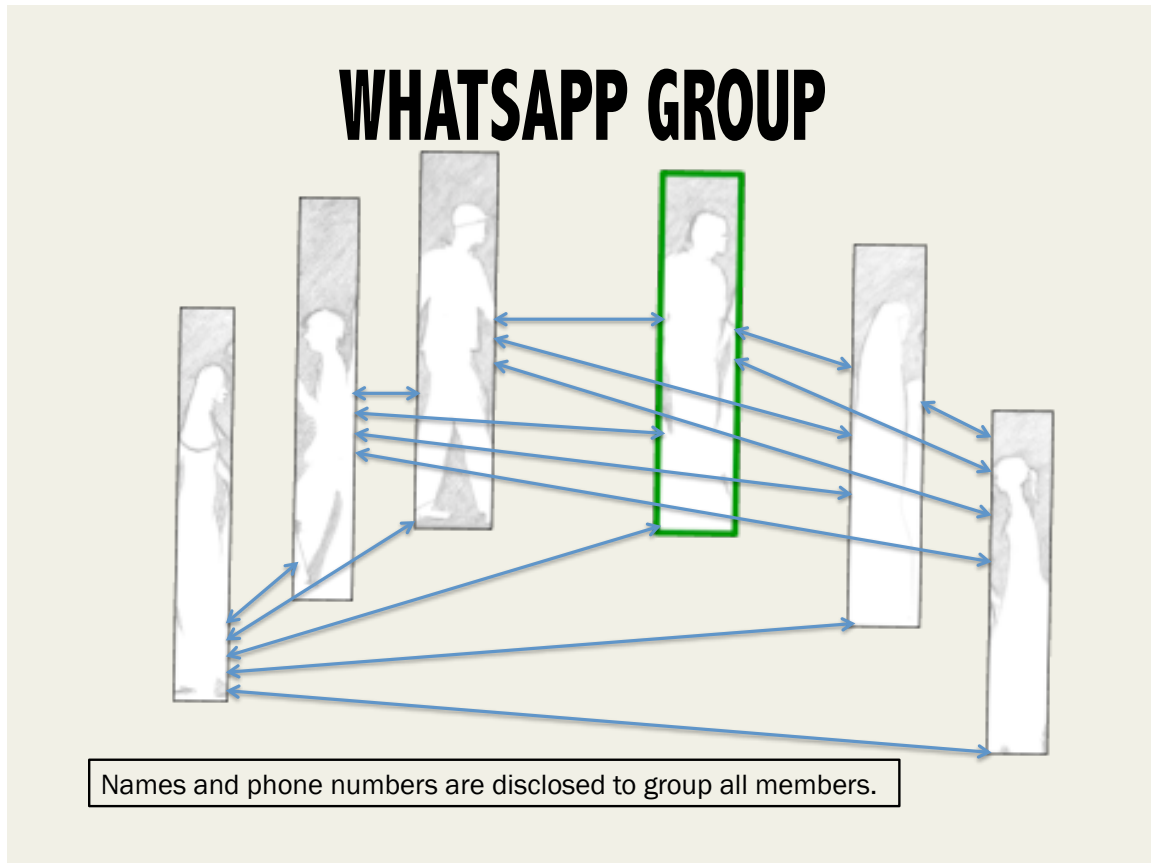


Note. Adapted from MacIsaac, 2017a.

The goal was to foster learner-to-learner communication. Within WhatsApp this could only be achieved in the group structure that disclosed the group members' phone numbers (see Figure 22). We knew this would be a challenge in obtaining ethical approval to study this course and meeting ethical standards for research as set out in the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* and the *INEE Minimum Standards for Education in Emergency contexts*.

Figure 22

Communication Structure of Regular WhatsApp Group



Adapted from MacIsaac, 2017a.

The first application for ethical approval was rejected. The application revisions began by reevaluating the proposed use of the WhatsApp in this course. The reevaluation was grounded in the following three goals:

- to increase opportunity for communication between learners of the two geographies in the hopes that deep and meaningful learning through collaboration could occur;
- to study the learners' online communications, and

- to respect research ethics and international standards for education in emergencies.

As detailed elsewhere in this dissertation, it was a prudent decision to add WhatsApp to the suite of communication options, including those afforded through Moodle. In terms of a disruptive innovation it increased the participation of actors (the learners) in an existing arena (the course) using an innovation (WhatsApp) at a lower cost and quality. By “quality” I mean, that it was clear that the communication tools within Moodle were more robust than WhatsApp, but WhatsApp provided a viable avenue for communication seven days a week for the learners in this course.

Being convinced of the value of using WhatsApp, we needed to address the obligation of research to lessen and disclose any risks to participants. We added redundancy in the consent letter in order to be explicit about the risk to learners. After describing the use of WhatsApp, we added, “The above described use of WhatsApp makes the absolute security of the data impossible to ensure.” Learners’ familiarity with socially using WhatsApp contributed to the expectation that the learners:

- could make an informed decision on the using of WhatsApp for this course,
- had a greater cultural acceptance of disclosing personal phone numbers within “closed” groups, and
- were familiar with the risk.

I committed to lessening the risk to learners, within the limits of WhatsApp. Firstly, I could build the WhatsApp groups to be closed and private, thus someone searching for groups within WhatsApp would not find these course groups listed. Secondly, I could diligently manage membership in the groups, limiting it to only those who should be there. In the ethics application revision, the consent letter was edited to include sharing

the responsibility between the teaching team and the learners for lessening the risk to the learners. The consent letter had participants agreeing to:

- use participant names and numbers only for course related activities within York University's Code of Student Rights & Responsibilities,
- not disclose participant contact information,
- delete contact information on a specified date, and
- clear WhatsApp chat history on a specified date.

With these changes, an ethics certificate was granted to study the 2017 iteration of this course using WhatsApp for online course communications.

Reflection on the Intervention of the 2017 Course

As this risk brought with it a significant increase of benefit for the learner, we presented the opportunity to the learners to choose. Ultimately, the final decision to use WhatsApp was in the power of the learners. It was offered in addition to the communication channels afforded through the Internet based Moodle course site. By the consent of the learners, the use of WhatsApp mobile chat was successful in enabling a significant amount of course related communication. As depicted in the final frame of my three-minute film, the learners were all in (see Figure 23).

The parody of the short film depicts agents of social justice education as comic-book heroes. The final frame closely parodies a 2017 promotional image of the DC Films and Warner Brothers Picture *Justice League* films which uses Batman in front of the tag line “All in.” I replaced the male Batman character wearing a mask and cape with a learner carrying a mobile phone, and wearing the contemporary clothing worn by the female Somali refugees in this study. The clothing is in three parts. The Jilbaab is a cape-

like over-garment from head to calf worn with a contrasting coloured scarf covering the forehead, and a full-length dress, the bottom of which is seen beneath the Jilbaab. The Somali clothing works well in this visual parody of Batman. I adopted the film series tag line, since we had full participation in the WhatsApp groups for the 2017 iteration of the course. They were indeed all in.

Figure 23

Final Film Frame



I built three types of WhatsApp groups: one for each local discussion group, one for each international presentation assignment group, and one for the whole class. I also built one WhatsApp group for the teaching assistants and me. I built and managed 39 WhatsApp groups. The course professor was not in any of the groups. There was one

teaching assistant in each group. Each teaching assistant was in several groups. There were a total of 4013 posts in the 2017 iteration of this course, which had 51 learners. These WhatsApp chat messages were about forty times the number of Moodle discussion forums posts in the 2016 iteration of this course. While these are not directly comparable units of measure, there is, in broad terms, a discernable order of magnitude difference. Notably, this level of participation was achieved without a portion of the final grade being attributed to participation.

At ICDE 2017 (MacIsaac & Doyle 2017), I presented reflections of learners in the 2017 iteration of the course. The learners' first reactions were unsettled at the use of WhatsApp and the international composition of groups. Once they talked it out, they were cautiously enthusiastic. Over the duration of the course, a series of optional Moodle polls were released for learners to answer. This was aligned with the premise that “the key to keeping students engaged is to design frequent events (e.g., quizzes, assignments, and projects) that make students remain active throughout the [course]” (Voghoei, Hashemi Tonekaboni, Yazdansepas, Soleymani, et al., 2020, p. 19). The polls addressed personal views or experiences, such as fasting during Ramadan, multilingualism, and parents' level of education. One Canada-based student provided the following reflection on the use of the Moodle polls:

One surprising moment for me was the diversity in the backgrounds of the students in our class. Through the questions on Moodle I had the opportunity to see the diversity in answers on the chart. I was also surprised how dedicated the refugees were even though they had connection issues, time differences, etc.

(slide 17)

“Connection issues” in the above quote refers to limitations of the Internet connection for the learners living in one of the camps in Dadaab Refugee Complex. The course aimed to develop empathy and awareness of other learners. One Canada-based learner wrote about collaborating with refugee learners for the group-presentation assignments:

I assumed that they would not be able to complete their share of the work due to language issues. However, in working with them I realized that that was simply a stereotype I had. They were extremely engaged, in constant communication, did a lot of research, and had beautiful responses for our case study project. (slide 15)

The learner statement that moved me so much that my voice broke to read it aloud during my conference presentation spoke to a shift of perspective from focusing on the needs of refugees to seeing their capabilities and intrinsic rights. The learner wrote:

Prior to this course, I had not realized the capabilities of refugees and the rights that they had. A big label that I grew up with involved refugees being placed in the category of “needy.” Despite the fact that they have been displaced from their homes, refugees are actually very capable in everything that they do. The issue is rather the fact [that] they are placed in a disadvantaged state and as a result must overcome many barriers before they can showcase their true skills & identity.

(slide 33)

The success of the interventions in the 2017 course set the basis for the 2018 course.

2018 Iteration of Course

The 2018 iteration of the course continues the use of the Moodle polls and WhatsApp. For the first time, the course delivery expands to offer the course in all three previous locales at once, Canada, Kenya, and Thailand increasing the total enrollment in

one class, aligning with the first element of disruptive innovation. The 2018 course continues to compose the presentation assignment groups with learners from each locale.

Implementation of the Action

Ethical Approval to Release Data Openly

The ethical approval applications to use data from the 2018 iteration of the course leverage the experiences from the previous year's ethics application and add the new component of openly release the data. It is worth noting, that these ethical applications are compliant to the 2014 version of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS-2), as well as, the 2018 revised version, which is published after the course is run and the data are collected. Article 5.3 of both versions includes the statement that research and ethics boards "should not automatically impose a requirement that researchers destroy the research data." In my profession as an academic librarian, I am connected with Canadian data librarians involved with openly preserving data. I turn first to them for advice regarding the ethics application.

Unsuccessful at sourcing any boilerplate language to openly release data from research involving humans, I need to craft it myself. In the applications, I establish what, where, and why data would be shared openly. The first two of these are straight-forward questions and answered broadly with the following text:

At the completion of this research project, the anonymized and de-identified data will be released openly through the University of Alberta Libraries' Dataverse network, under a Public Domain license, making the data available for future secondary use forever. Electronic and paper files pertaining to this study archived by Peggy Lynn MacIsaac will be destroyed five years after the end of this course.

The third question asking why the data would be shared openly requires a more complex answer.

General and study-specific arguments support my desire to openly release the data. My broad stance pertains to the general limitation of any individual study. I will use a scenario of closed-data study involving humans in which data is collected, analyzed using that study's research questions, and then destroyed, after five years. Before that data destruction date, secondary researchers can apply to have access to the data. If successful, they must seek consent from the original participants for permission to use the data to pursue new research questions. In the scenario, if there were no secondary use of the closed data, this would mean that the usefulness of the data collected was limited to the scope of the original study. Closed-data impedes the expanse of research potential that may result in multiple researchers using the same open data.

To collect research data, resources are used. Let us call this a cost. With open data there is no cost for subsequent use of the data. With closed data, there is a cost to secondary researchers to obtain participant consent. This may be an insurmountable task if the participants were transient. For these reasons, I strongly support open data as an important component in the open movement.

There are study-specific arguments for openly releasing this data. Open data can remove the common barriers to researching persons of concern that are outlined with specific detail in the *Ethics Considerations* section of *Chapter Three*. I will describe it here in more general terms. The "cost" is high for collecting research data involving participants who are difficult to access. Therefore, the value of this data is high and has

potentially significant benefits to secondary researchers who may not have the resources to overcome barriers to accessing these populations of participants.

I am not obligated to openly release the data, but choose to do so out of a principled desire to contribute to the open movement in the fullest extent while complying with all legal and ethical requirements of this study. While I believe the success of the intervention of this action research of socially connecting learners internationally is the most valuable part of conducting this study, I believe that the open release of the data might become an important part of publishing this study. A specific quality of my data is that it authentically documents the voices of persons of concern. My data captures communications between learners that were uninterrupted by the researcher. I did not interfere with the communications between the learners. Openly releasing my data increases the opportunity for more research to be conducted pertaining to persons of concern without increasing risks to this vulnerable population.

Reflection of the Action

In the months leading up to the start of the 2018 iteration of the course, there is growing labour unrest at the host institution, York University. The course and the ethical approval applications are being prepared, in hope that the labour dispute would be over before the start of the course. Unfortunately, the labour dispute turns into a strike directly affecting the Canada-based teaching assistants but not the course professor or me. We drop the plan to have WhatsApp groups for the local learner-led discussion groups. We continue with WhatsApp groups for the presentation assignment groups, with a notable absence of teaching assistants in the groups. Initial enrolment is high for the course following the success of the previous year and expansion to three locales in the one class,

and we anticipate the ratio of refugee to non-refugee learners to be approximately two-to-one. Unfortunately, many Canada-based learners withdraw because of the labour dispute. The ratio of non-refugee to refugee learners for the course turned out to be closer to four-to-one, with 75 refugee learners and 18 non-refugees.

On March 17, 2018, less than three months before the start of the EDUC 3711 course, *Guardian* newspaper reporters Cadwalladr and Graham-Harrison break the story of a Cambridge Analytica and Facebook data harvesting breach. This breach triggers a loss in public confidence in the protection of personal data held on social media platforms (Vuorinen et al., 2018) or used in scientific research (Lawler et al., 2018, pp. 1014-1015). The scandal sees the harvesting and misuse of personal information from participants who thought they were taking a personality test using a Facebook app (Berghel, 2018, p. 84). The data was subsequently shared with Cambridge Analytica for political purposes to which the participants did not consent. Lawler et al. (2018) mark a significant growth in the public's distrust in data science following this scandal (p. 1014). Several learners in EDUC 3711 proffer privately that because of this data breach they are reluctant to participate in my study. I do not know how many learners decline participating in the study for this reason.

Following the high participation rate (82%) in the study of the 2017 iteration of this course (MacIsaac, 2017b), an equally high participation rate was anticipated for this study of the 2018 iteration of the course. Unfortunately, that is not what happens. Only 64% of the learners in the course consent to participate in this study. Coupling the low study participation rate with the withdrawals from the class despite the expansion to three locations, the study sample of learners is lower than had been hoped.

Typically, a learner would focus on only one condensed course at a time because the workload is so intense. Part way through EDUC 3711, some Canada-based learners reflect that they reduced their time spent on the course. This reduction is because York University decided to allow learners who had enrolled in the immediately preceding winter term courses (which were interrupted due to the labour dispute) to complete their course assignments during the summer term. This meant that they split their time between finishing multiple winter term courses and EDUC 3711. Weekly they attend one face-to-face class led by the professor on York campus, two student-led study group meetings (at locations of the learners' choosing), and then post their meeting notes to Moodle. The learners in each of the locations have very different experiences.

For the Kenyan-based learners the face-to-face learning centre is surrounded by barbed wire fence and patrolled by armed guards. BHER provide each learner with an iPad and money to travel to the learning centre on Saturday. The centre is equipped with computers, monitors, a projector, and access to the Internet. The learners use their time at the learning centre to (a) attend the synchronous class led by an on-site member of the teaching team, and (b) access their Moodle course to download their viewings and readings onto their iPad, respond to the single question polls, and post their summaries of their weekly study groups that happen close to the learners' homes between the synchronous class times. Their time at the learning centre leaves little opportunity for deep and meaningful peer-to-peer discussions via the Internet using the Moodle forums. Class time ends two hours before sunset, to ensure that all learners have sufficient time to get home safely before dark. Mobility in the camp is restricted for between 6pm and 6am. Female learners in Dadaab report how women's bodies are the target of misogyny

where walking alone or outside these normative daytime hours can result in sexual assault (Dahya & Dryden Peterson, 2017, p. 298).

The Australian Catholic University (ACU) provides for the Thailand-based learners. Cranitch and MacLaren (2018) describe the arrangements:

ACU operates a study centre and two dormitories in a village outside Mae Sot for male and female students. Though they have protection through a local village authority pass, they do not have valid residence permits. This means that to avoid detainment by Thai police, students have only a limited freedom of movement within the village. As the police and military rules shift and are enforced in often unpredictable ways, security is a significant on-going management issue which requires constant monitoring and coordination by ACU staff. ACU also accepts responsibility for student health and wellbeing by providing food, regular counseling, visits to the hospital if sickness strikes and safe transport when a return to camp for head counts or family reasons is necessary. In all these ways, ACU takes on significant responsibilities not routinely necessary in an Australian university context in order to fulfill the humanitarian imperative of protection. (p. 268)

Learners in the three locations have differing rapports with the institutions providing access to higher education, and differing interactions with other learners.

On March 27, 2018, at the Comparative & International Education Society annual conference, I participate in a talk-show-style 23-person discussion panel on mobile instant messaging use by educators of refugees. A researcher in the audience poses a question about the problem of inappropriate content being shared through MIM. The

other researchers on the panel and in the audience, contributes anecdotes on their difficulties in addressing this problem. I learn from this substantive discussion that it is a common problem, even though I had not experienced it. I am the only one in the conversation who discloses using MIM in a formal university course. Everyone else is using it outside formal education, such as connecting new teachers with their former classmates after graduation. I wonder why I have not seen inappropriate content in the 2017 iteration of the course.

Part of the success of transitioning EDUC 3711's online course discussions to the WhatsApp is that the learners are comfortable using WhatsApp in their personal lives. Being a formal university course, there are generally accepted communication norms of conduct that may be sufficient to prevent learners from sending of inappropriate content. Without knowing if it is sufficient, we make three things explicit about the use of WhatsApp in EDUC 3711. Firstly, it is voluntary. It is possible for someone to be successful in the course without using the course related WhatsApp groups. Secondly, we highlight the York University guidelines on acceptable student conduct. The anecdotal accounts from other researchers during that conference panel make me mindful of the potential for inappropriate content being shared in the 2018 iteration of the course. Tang and Hew's (2017) literature review lists inappropriate behaviour as one of the challenges to using MIM in educational contexts. Thirdly, the students are informed that the chat messages will be used in this study and openly released as the data. Fortunately, I do not have to deal with inappropriate content during this study. The potential for inappropriate content to be sent between learners highlights that not all communication between

learners is supportive of learning. This study maintains the position that the quality of messages matters to learners' academic achievement.

The objective of the interventionary action (to use WhatsApp) is to simply increase the volume of messages sent between learners. The hope that the WhatsApp communications can be meaningful to the learners is predicated on the strength of the curriculum and instructional design of the entire EDUC 3711 course. My study is to observe and reflect on this action. The statistical reflections distill the relationships between the learners' grades and their messages, after coding them for demonstrations of social presence. The lingering question about quantity versus quality leads me to statistically analyze if the quantity of messages sent by learners correlates to final grade. For the population of this study, there is no correlation. I then want to understand how this finding fits with other research.

It is difficult to establish consistency between studies investigating whether the volume of online discussion posts could predict final grade, separate from other variables such as quantities of time spent in LMS, viewings of lecture videos, or completions of quizzes. Cook and Germann (2010) analyzed five online discussion forum variables in relation to grades. Interestingly, they counted separately what I called posts and replies sent by learners, and the remaining three variables were the number of emails sent, pages within the LMS visited, and articles within LMS read. They studied four different classes taught by two different instructors. They find no correlation between the number of posts or replies and final grade. For three out of the four classes studied, they find a significant correlation between grade and a bundle of three variables (posts, emails, and pages) added together (p.16). Notably, replies are not part of this bundle of variables.

Alzahrani (2017) reviews contradictory studies exploring online discussion posts and final grades, and finds some show correlations and others, none. Alzahrani concludes that the, “mixed findings of previous studies indicate a complex relationship between student participation in ODFs [online discussion forums] and their final course mark that is sensitive to contextual dimensions” (p. 171). Alzahrani’s primary research of 205 undergraduate students shows the volume of posts is an indicator of final grade, and even parses initial posts from reply posts and shows reply posts are an even stronger indicator of grade (p. 170). When I look at my drawing of the online discussion forum data of the 2016 iteration of the course (see Figure 19) the most compelling parts are the replies to posts, since they depict dialogue, whereas the stand-alone posts do not. Intuitively this makes sense to me, but Cook and Germann’s study (2010) suggest the contrary, documenting “replies” either as a separate variable or bundled with other variables, as having no significant correlation to grades. After studying 291 distinct online courses, Voghoei, Hashemi Tonekaboni, Yazdanehpas, and Arabnia (2019) find no consistent correlation between the number of posts in online course discussions and students’ grade. Neither do Engle et al. (2015, p. 63). Song and McNary (2011) report that their study does not show a strong correlation “between the number of posts and student’s course grades” and speculated that maybe it is “the quality rather than the volume of students’ posts that is strongly associated with course performance” (p. 12). As early as 2005, Garrison and Cleveland-Innes surveyed the literature investigating online learning environments and find that there is “a growing body of research showing that the quantity of interaction does not reflect the quality of discourse” (p. 135).

My finding of no correlation between the total number of sent messages and the final grade fits within the diverse range of results found by other researchers. I am pleased to find no correlation because it motivates me to continue to interrogate variables with more granularity for a correlation to grade. Furthermore, to only investigate at the level of total messages sent would preclude exploration into the possibility of both negative or positive correlation variables (Joksimovic, 2015), or weaker variables bundled with stronger ones, reducing the correlation factor, as Alzahrani's 2017 study finds with posts and replies (p. 171). Motivated to continue my study, I analyze the data looking for correlations between grades and counts of each of the categories of indicators, affective, interactive, and cohesive. Finding none is also a relief, because the straight count of any one category of indicator returns to the reliance on volume than quality. I am hoping to highlight the relationships between the three categories of social presence indicators in this study. I continue investigating analyses that might be statistically interesting while still being perceptible in practical terms to an educator. Significant correlation and regression analyses produce two variables that could be used as indicators of final grade, affective and cohesive demonstrations of social presence as a percentage of the total demonstrations of social presence. These will be discussed as the last of the eight key findings in *Chapter Six*.

Visual Analogy

As explained previously, numeric data that do not meet the assumptions of analytical testing are explored descriptively. The relationships between social presence and final grade for this population at the level of the individual assignment groups cannot

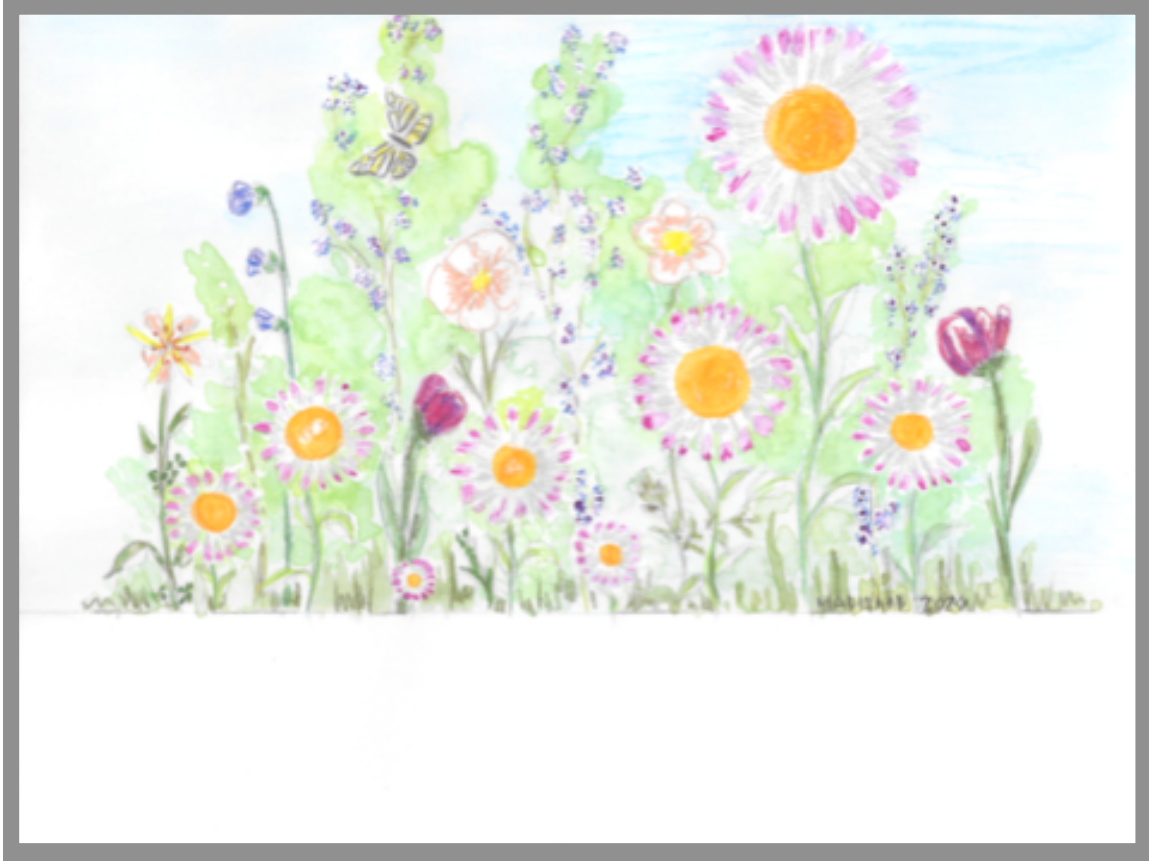
be explored through regression analysis. Descriptively, I explore the daily demonstrations of social presence aggregated for each assignment group.

I start by considering the manner of presenting the data. For each group, I want to show (1) all three social presence categories in relation to one another, and (2) the total number of messages conveyed. How these four data points change over time is also of interest for me. Additionally, I want to represent that while the WhatsApp groups were separate from each other, the learners in the groups had other opportunities to learn about other learners as they were in the same course, and did things on the Moodle course such as participate in the Moodle polls throughout the course. As I draw ways to represent these data, a visual analogy emerges (see Figure 24).

My drawings and paintings are a visual analogy of the study data and findings. I do this knowing that all analogies ultimately break down (Glynn, 1991, p. 230). Before they break down, they can help explain a complicated concept, or approach an understanding of an observable phenomenon by connecting to prior knowledge. The choice of drawing and painting is part of my mindful practice of what Schon (1983) calls reflection-on-action, occurring after the action has taken place. This practice is mindful as described by Bentz and Shapiro (1998) and values personal authenticity as a focus of ethics in first-person action research (Coghlan, 2013). Where arts-based and first-person reflections overlap in action research is as “artful knowing,” as non-traditional approaches to conducting and disseminating research (Clarke & Bautista, 2017). The figures in this chapter are selected from the work I created during this study. The chosen images convey understandings about the data and findings beyond the statistical analysis.

Figure 24

Visual Analogy of Data



The visual analogy renders each of the eight presentation assignment groups' WhatsApp interactions as a separate flowering plant (see Figure 24). To represent the groups, I painted eight round aster-like flowers growing amongst other plants that represented the other social interactions, such as locally coming together multiple times per week for in-person class and for their student-led discussion groups. The other plants are also proxy reminders that learners may interact outside the course. In the garden analogy, I rendered flying insects to acknowledge interlopers who have contact between groups.

Figure 25

Visual Analogy of Data Isolated on Groups

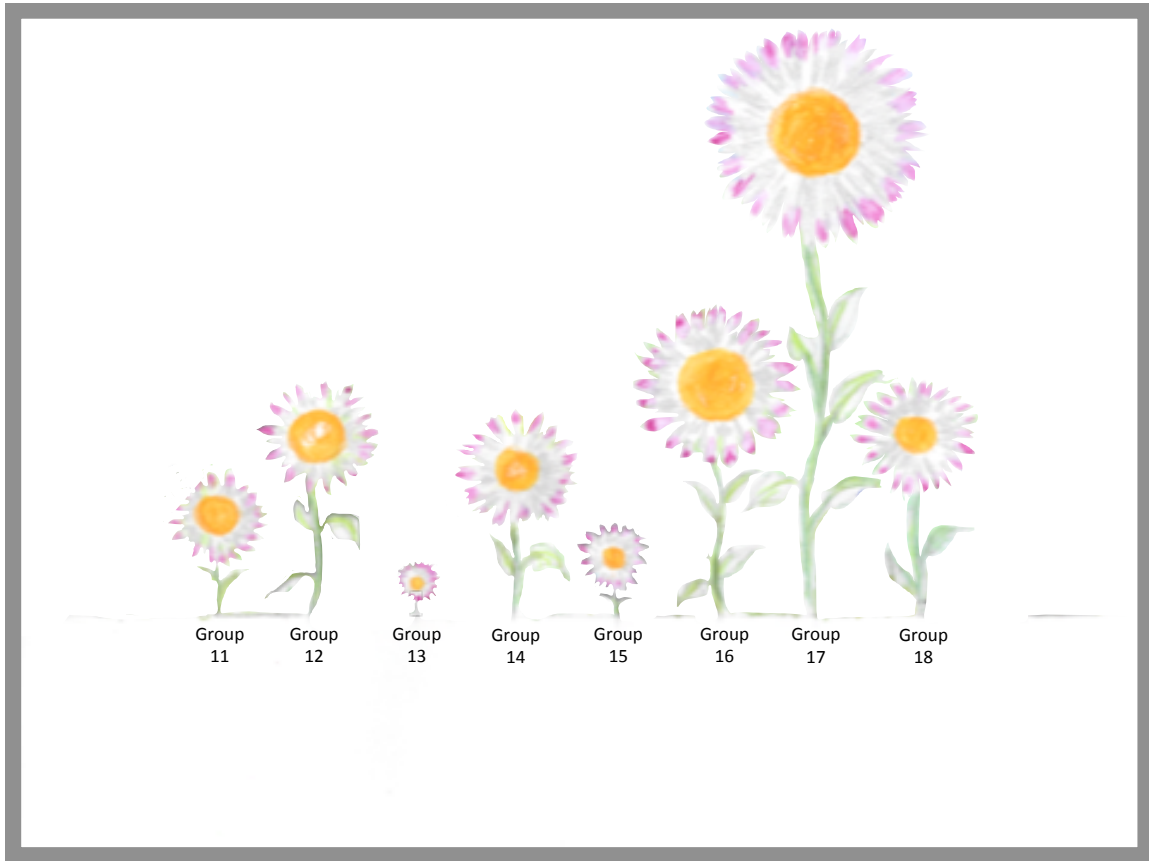
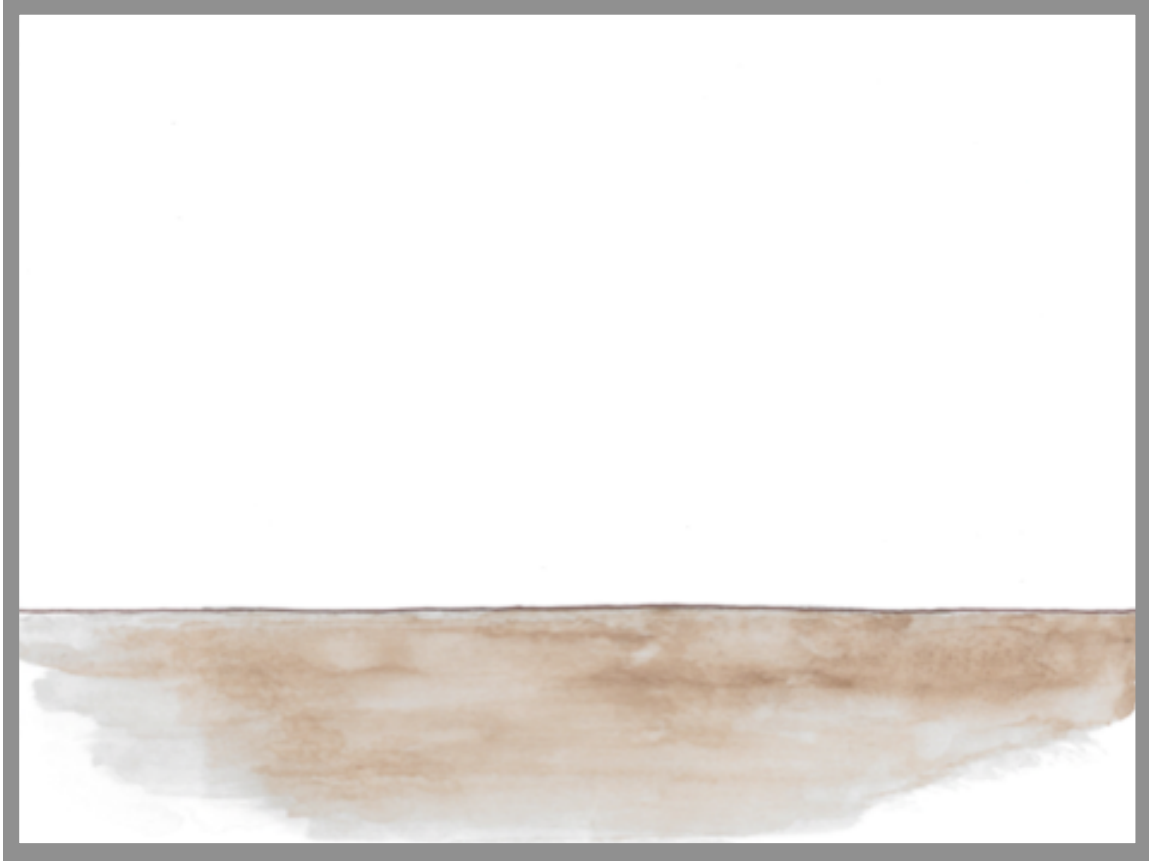


Figure 25 isolates the plant representation of the data of the eight groups in Figure 24. The length of the stem represents the total number of chat messages. The mathematical area of each flower head represents the total demonstrations of three categories of social presence for that one group. The area of orange centre (the disk floret) represents the total number of chat messages coded for affective social presence indicators. The areas of the two colours in the petals (the ray florets) represent the totals for interactive indicators (light grey) and cohesive indicators (pink tips). The sizes are scaled equally, so that visual comparisons can be made. An important part of this analogy is that even the smallest flower is complete if it has all the components of a flower.

Figure 26

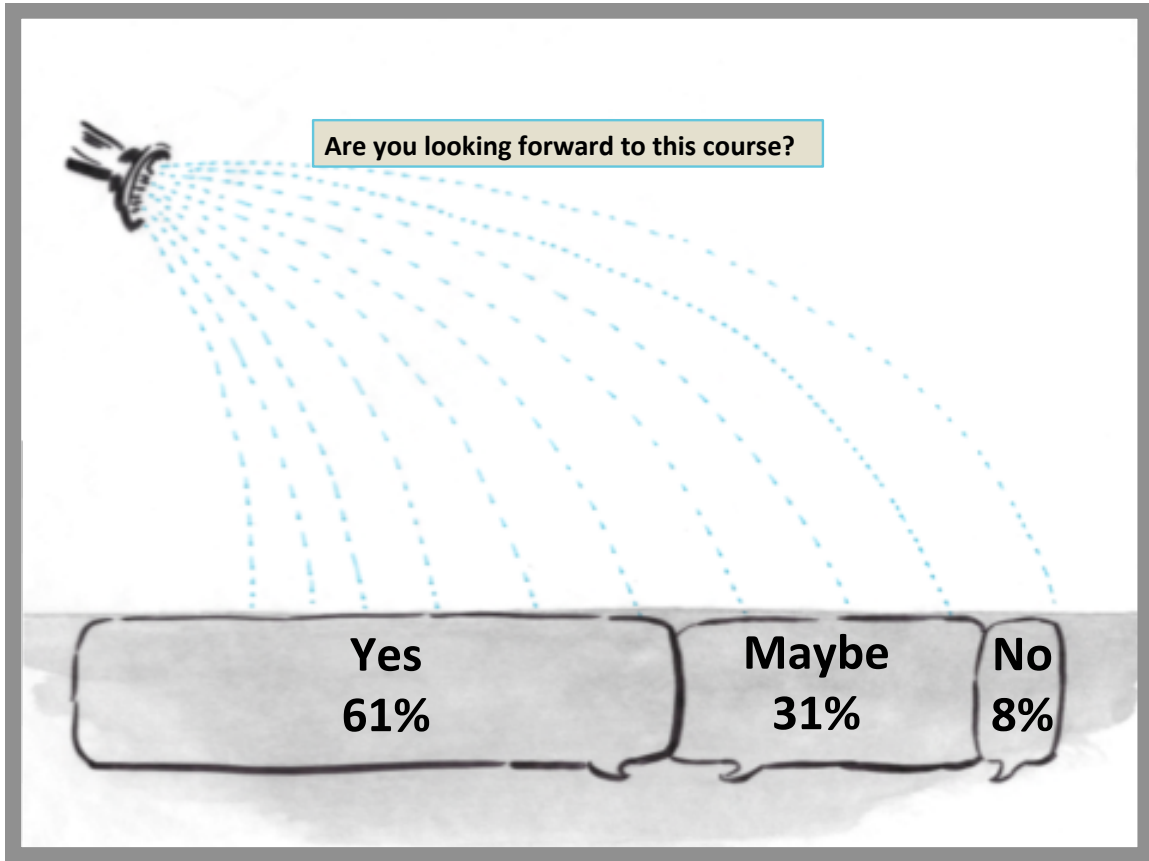
Visual Analogy of Data – At Course Start



The renderings of the group data as flowering plants in Figures 24 and 25 represent the accumulated totals over the duration of the course. I then sketched various ways to represent the change over time of the four statistics (total messages and total demonstrations of each of the three categories of social presence indicators) for each group. Figure 26 depicts the baseline for a chronological series, in which the course-wide design elements are represented by the soil. At the launch of the course, the course had been significantly modified. Preparing the course is like preparing soil for a garden, it establishes the quality of the environment that connects the learners.

Figure 27

Poll One Results



Before the assignment groups are composed, the series of Moodle poll questions is started. The polls are released one at a time throughout the course. The first one asks, “Are you looking forward to this course?” and is intended to be non-threatening, in terms of not asking anything too personal (see Figure 27). It is also used to build trust that the poll results are aggregated and viewable only after submitting a poll response. In the garden analogy the polls are like watering the garden, affecting learners across all groups. As reflected by learners’ comments, the polls enrich the course experience. The aggregated responses to the poll questions are illustrated in dialogue bubbles that are proportional in size to the number of responses.

Figure 28

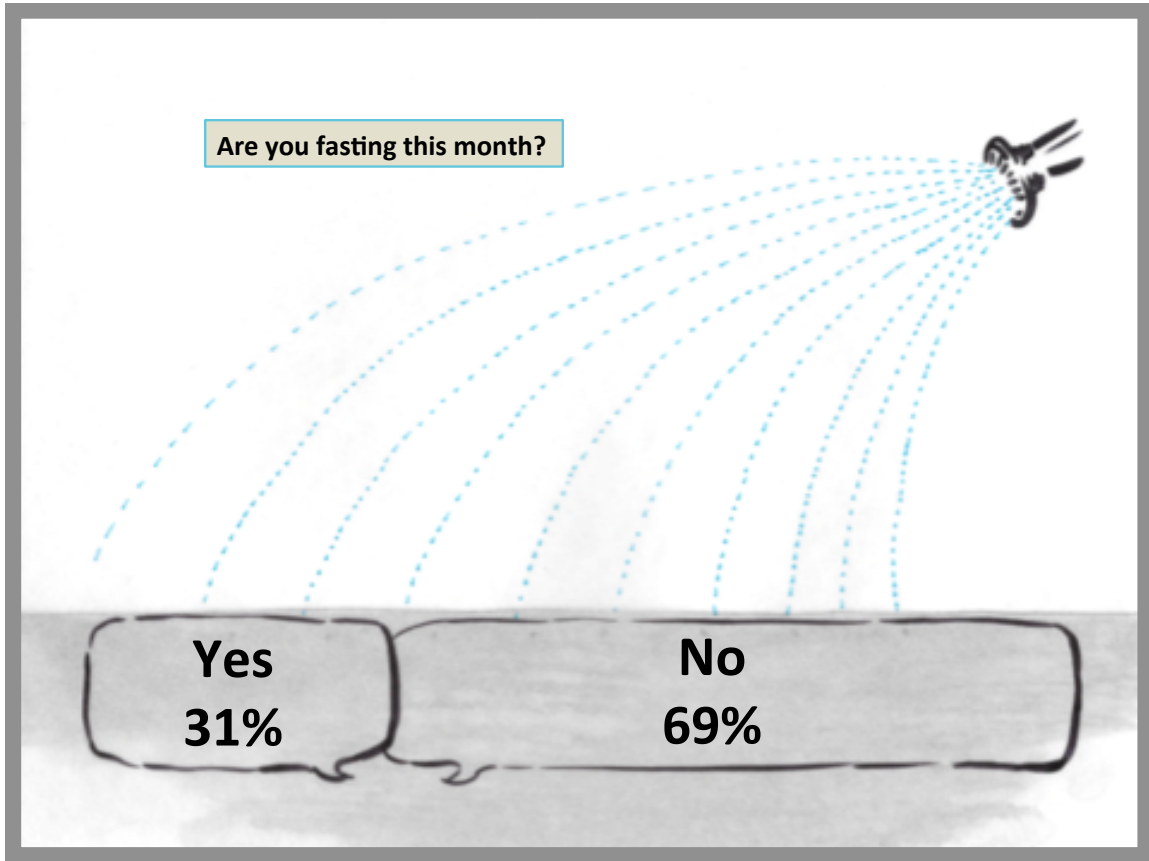
Visual Analogy of Data – June 11



The planted seeds in this visual analogy mark the composition of the WhatsApp groups on June 11 (see Figure 28). At this point in the course, the learners have sent the course professor their preferences of the four topic areas, which are health; primary and secondary education (K-12); technical and vocational education (TVET); and higher education. Based on these preferences, the professor forms each assignment group with learners from different locales. Without further labeling in Figures 28 to 44, the groups are represented in this visual analogy from left to right sequentially by their group numbers assigned for this study as being groups 11 through 18 inclusive. This is the same order as shown in Figure 25.

Figure 29

Poll Two Results



The course is scheduled during the condensed summer term at York University, which unfortunately coincides with the Muslim holy month of Ramadan in 2018, in which one of the practices is to fast during daylight hours. The second poll question asks, “Are you fasting this month?” as a way to share personal information without feeling exposed or intimidated (see Figure 29). With nearly a third of the students fasting, it is a way to begin to socially understand others in the course as real people.

Figure 30

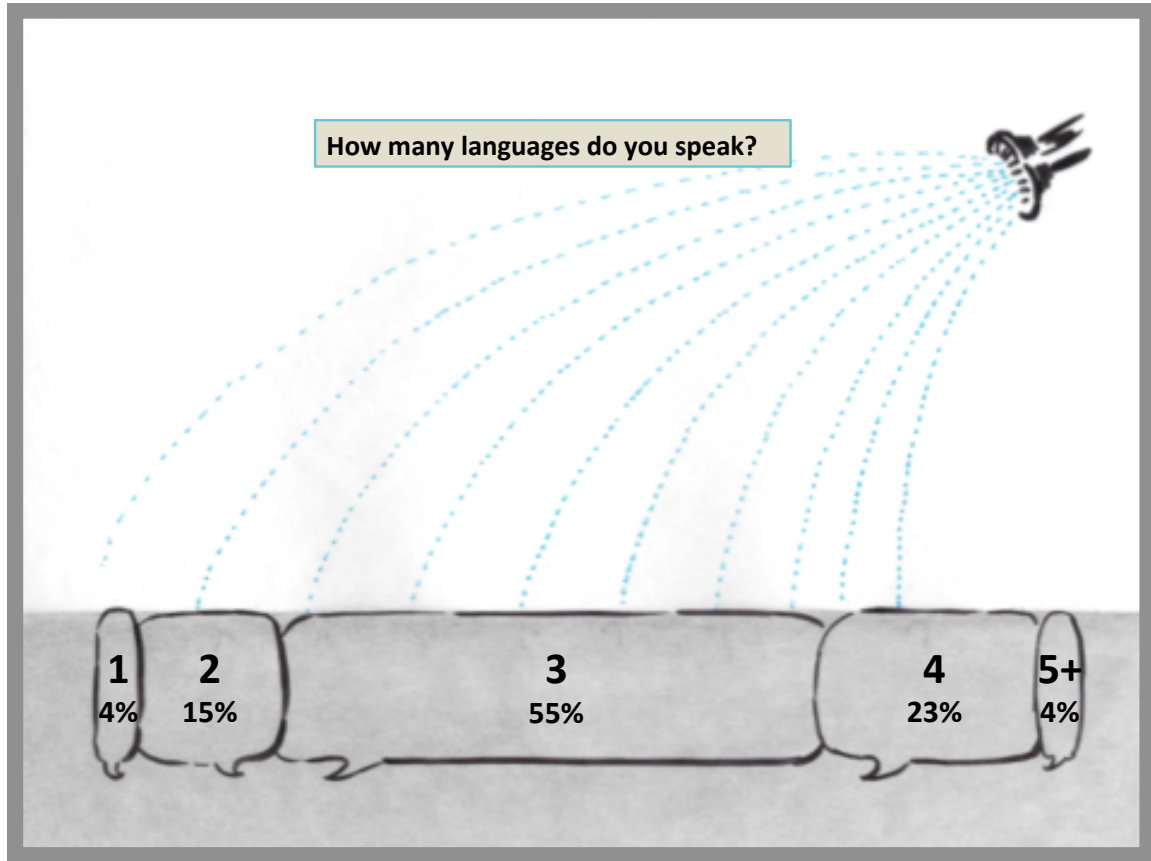
Visual Analogy of Data – June 12



By the end of the day on June 12, 2018, there are WhatsApp chat messages sent in all the groups at a scale that I describe as subtle. Figure 30 depicts this as seedlings that have not broken ground, yet. On June 12 the learners are at the beginning of the group work. The study sample reflects groups in each of the four assignment topic areas. Health is the topic for Groups 12, 13, 14, and 16; K-12 is the topic for Groups 17 and 18; Group 11 has TVET; and Group 15 has a topic in higher education. At this point the group topic area and group members are established. The first task for each group is to decide on their specific presentation focus from a long list of options within their topic area.

Figure 31

Poll Three Results



Poll three asks, “How many languages do you speak?” (see Figure 31) serving two objectives. One is to highlight a diversity of skills as a strength. The other is to showcase a skill of the refugee learners, because English, the teaching language of the course, is not their first languages. Incorrectly, I expected primarily monolingual responses from the Canadian learners, having forgotten that the Canada-based non-refugee learners live in the linguistically diverse community of North York, Ontario. Only 4% of total respondents self-identify as monolingual. The majority of the multi-lingual students speak three or more languages.

Figure 32

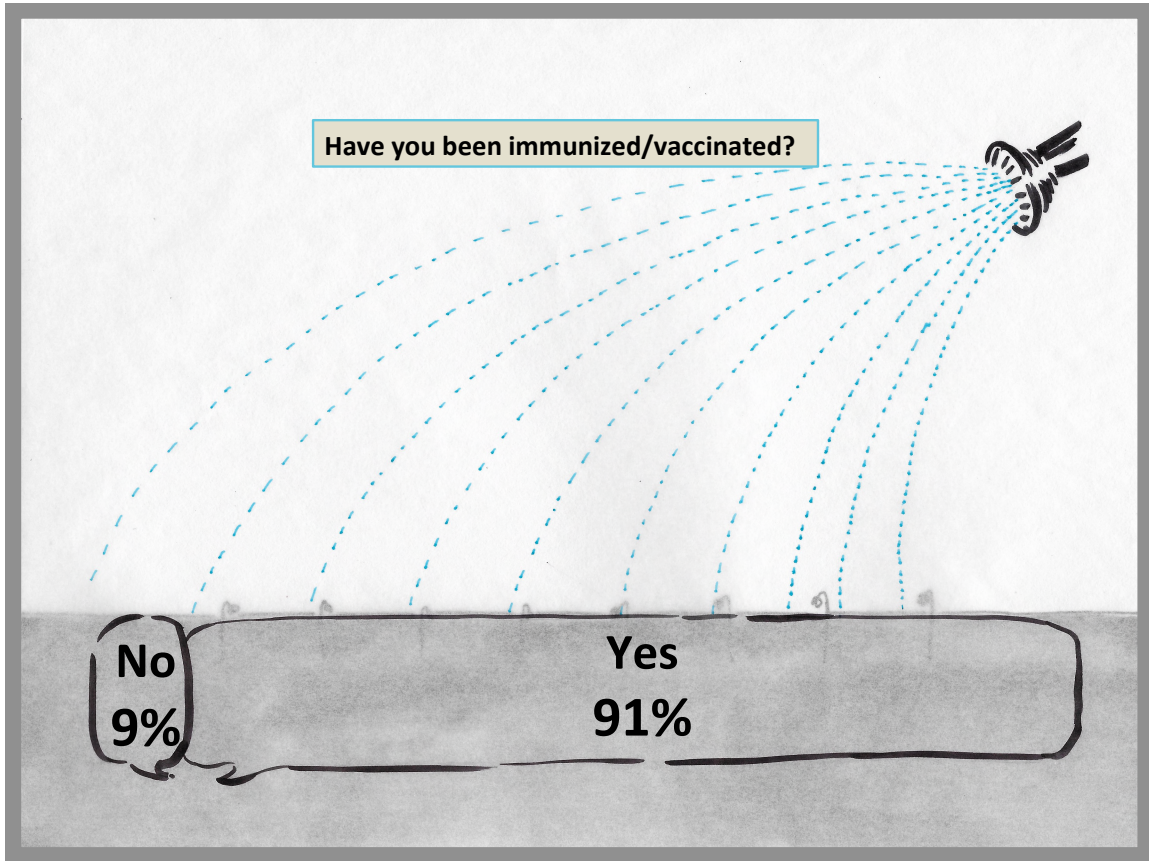
Visual Analogy of Data – June 13



Figure 32 continues the visual analogy of the groups as individual plants in a common soil. The process of drawing and painting is part of my study’s mindful practice. This mindfulness has two objectives. One is to still the busy-ness of conducting doctoral research. The other is to be open, without limitations or constraints, to possible understandings of what I am creating visually in order to inform my visual design. Every piece of visual art in this study starts from the data or findings. The act of seeing the art I create forces me to ask myself, “Is this image a successful communication?” and “Does this image show me something about my study that I have not considered?”

Figure 33

Poll Four Results



The fourth poll question asks if the respondent has been vaccinated (see Figure 33), with 91% of respondents answering yes and 9%, no. This question, composed by the professor of the course, is the first to connect the personal experiences of the learners to the course curriculum on education and international development, as health education is one of the topics covered in the course. The poll questions are closed-ended with a limited number of answers from which to select. To accommodate limited time to access the Internet, the polls are designed to be quick for the respondents to share about themselves.

Figure 34

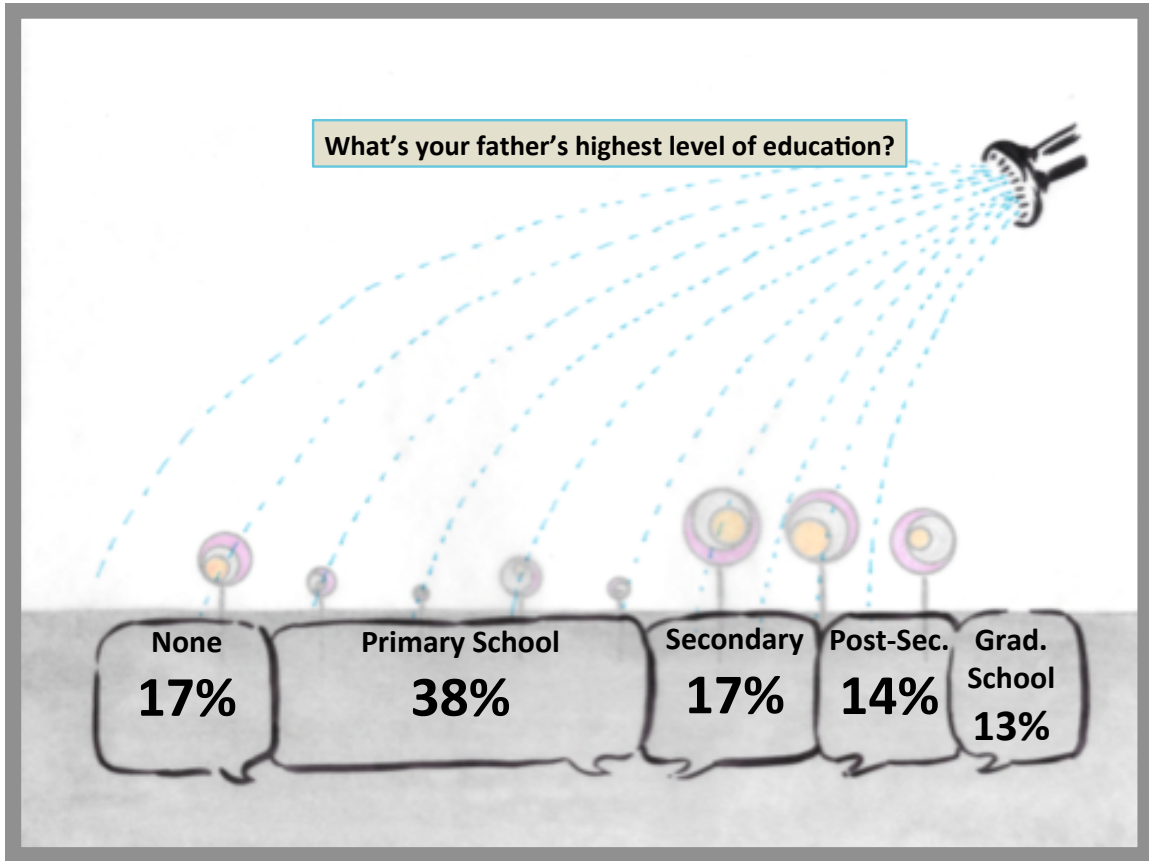
Visual Analogy of Data – June 14



The original visualization of this garden analogy is rendered in the complex details of aster-like flowering plants. I allow the design of this visual analogy to evolve. My study has a simple focus. After collecting 2,878 chat messages and coding 31,658 data points, the comparisons here are on four statistics for each group. The total messages are plotted as straight stems (see Figure 34). The social presence categories are portrayed as nested circles. The area and colour of each corresponds to the floret disks and rays in Figure 25, which are plotted as concentric circles. The simplified illustration in Figure 34 shifts the circles to now be eccentric creating two crescent shapes that heighten the readability of the scaled illustrations.

Figure 35

Poll Five Results



Poll question five asks, “What’s your father’s highest level of education?” (see Figure 35). Asking about respondents’ education of family of origin, celebrates the positive choice of respondents to pursue a university degree. For 72% of the respondents to the fifth poll question, the simple fact of being enrolled in the course exceeds their father’s highest level of education. For each poll, questions are crafted such that there is no right answer and values learner input. For some learners, their secondary school education was rote learning. These poll questions aim to foster trust between learners to share deeper more critical views throughout the course.

Figure 36

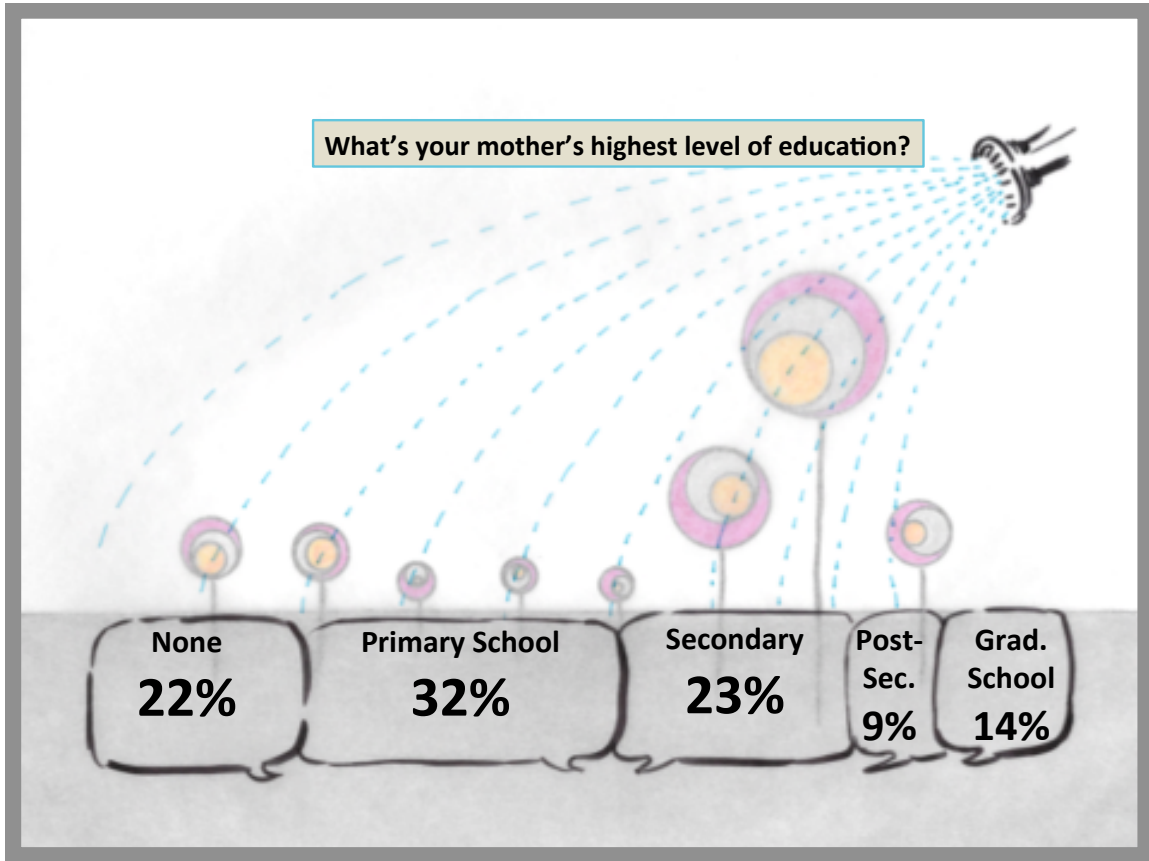
Visual Analogy of Data – June 17



The areas of the three colours in the flower heads of Figures 34 to 44 are drawn using eccentric circles. The inner circle (total affective social presence) and the outer circle (total social presence) were easy to set for each group. I needed to calculate the grey crescent such that when the inner circle was subtracted from its area, the remainder would equal the total interactive social presence. I did the same to calculate the area of the outer crescent to accurately represent the total cohesive social presence. I did additional calculations to double check this approach. Once my formulas were accurate, I computed the three drawn circles for each group for the representational dates used for these illustrations. Figure 36 represents accumulated statistics to June 17.

Figure 37

Poll Six Results



Similar to the father's education reported in poll question five, poll six asks about the respondent's mother's education (see Figure 37). The responses show 77% of the respondents have exceeded their mothers' education by enrolling in this university course. Keeping the polls short, we did not parse graduate school any further. See Appendix F for the full list of poll questions, and the aggregated responses from the class.

Figure 38

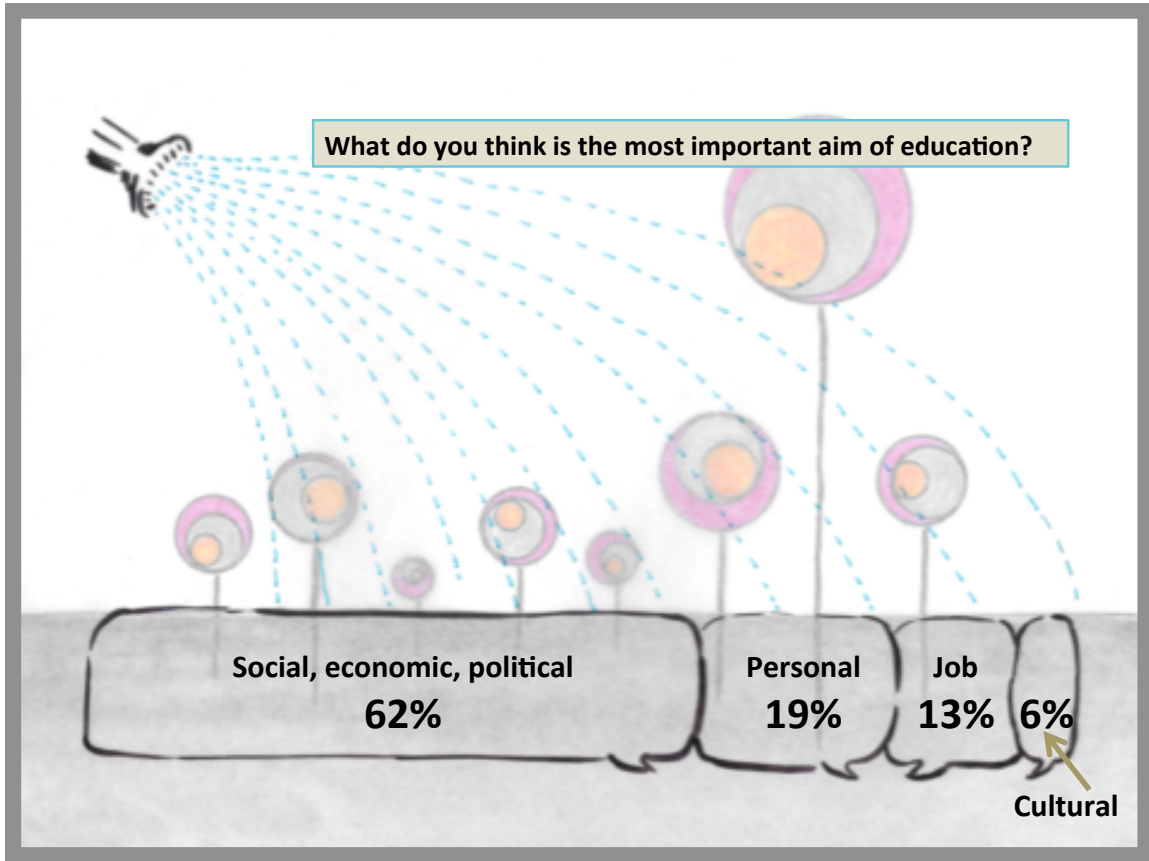
Visual Analogy of Data – June 20



In Figures 34 to 44 each group is illustrated as a mathematical chart of the data. Each chart combines attributes of a bar graph and pie chart, but takes them further. For example, Group 12 has a very thin pink outer crescent and a very large inner orange circle compared to Group 16 with a thick pink outer crescent and a smaller orange inner circle. This translates to Group 12 demonstrating more affective and less cohesive social presence, which together are predictors of low grades. This would predict Group 12 would have a lower average grade than Group 16.

Figure 39

Poll Seven Results



Poll seven directly connects respondents’ personal views to the course curriculum, by asking, “What do you think is the most important aim of education?” (see Figure 39). The majority of the respondents (62%) select the answer “social/political/economic transformation.” Of the remaining responses, 19% choose “personal growth/enlightenment;” 13% choose “job training/ livelihoods;” and 6 % choose “community/cultural contribution.” The diversity of results reflects the spectrum of theories on the purpose of education discussed in *Chapter Two*.

Figure 40

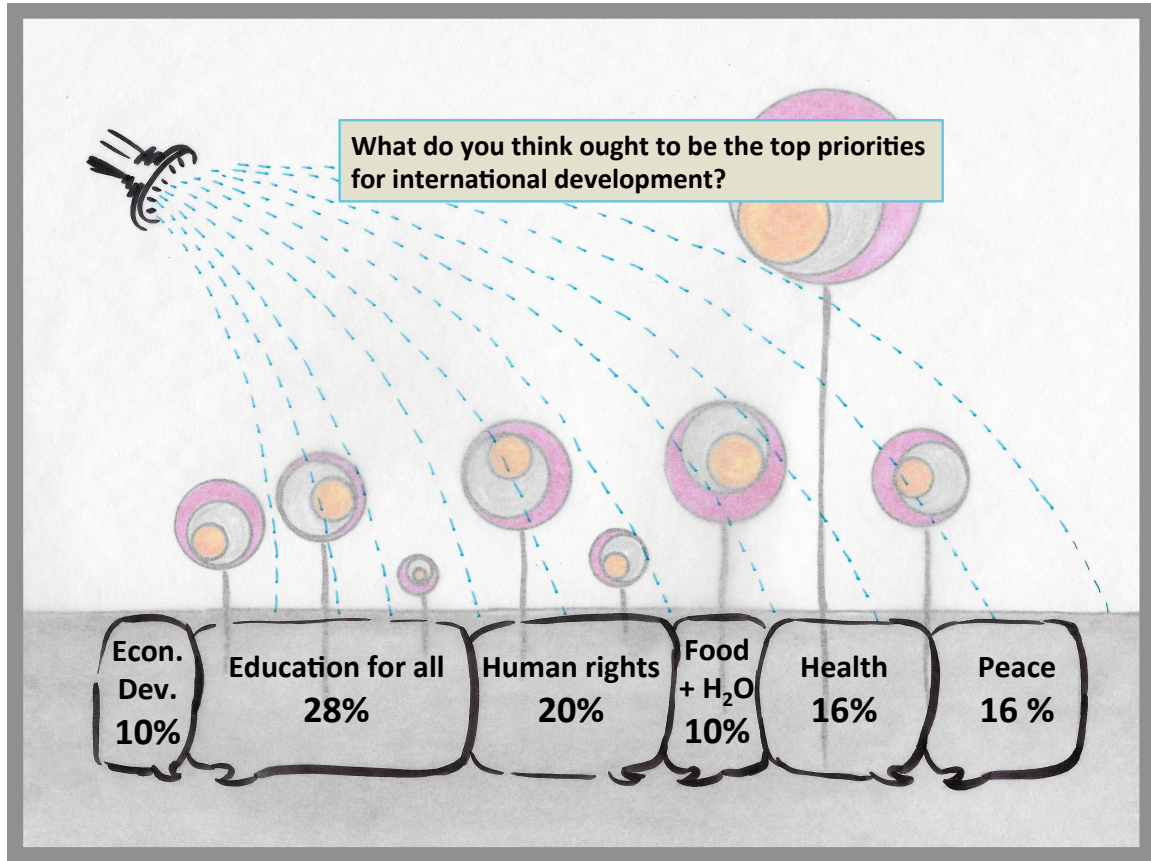
Visual Analogy of Data – June 22



The illustrations in Figures 34 to 44 are drawn in black ink and then rendered in watercolours to emphasize the areas that matter in this study (see Figure 40). The green stems mark the accumulated total number of chat messages sent. The pink outer crescent and orange inner circle identify the social presence categories (cohesive and affective, respectively) that are found to be significant predictors of final grade. Interactive social presence is represented in the inner crescent by the neutral colour grey because this category of social presence is found not to be a predictor of final grade. The soil is awash in brown to represent the opportunities for learners across the course to project themselves and perceive others socially as a real people.

Figure 41

Poll Eight Results



Poll question eight asks respondents, “What do you think ought to be the three most important priorities for international development projects?” (see Figure 41). The poll offers six possible answers. The answer “Education for all” receives 28% of the responses. Of the remaining possible answers they each receive between ten and twenty percent of the responses. “Equity and human rights” receives 20%. “Healthcare and disease prevention” and “peace and conflict resolution” each receive 16%. “Economic development” and “food security and clean water” each receive 10%. The six answers are areas of discussion within the course curriculum. Each is valued without the assumption of a right answer.

Figure 42

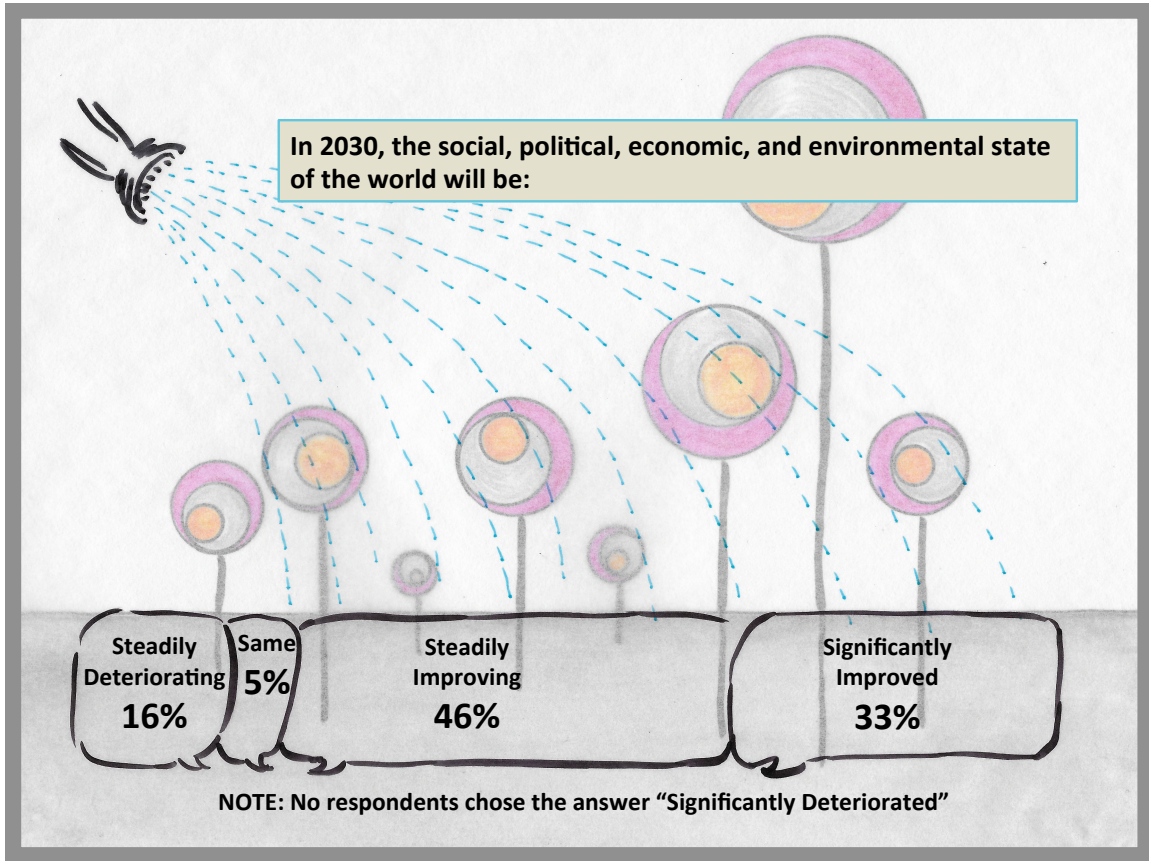
Visual Analogy of Data – June 25



Figure 42 shows the total social presence for each of the eight groups up to and including June 25. The dates selected to be illustrated in Figures 34 to 44 were chosen because they marked significant correspondence increases. I put the daily totals for each group into a spreadsheet and then grouped dates by the changes in accumulated totals. Knowing the size of the final illustrations, I needed the changes to be significant enough to be visually discernable for at least one group. I wanted it to be visually perceivable, like movement between printed pages of a flipbook animation. The poll questions were appropriately interspersed in their order of release.

Figure 43

Poll Nine Results



The ninth and final poll asks the respondents to envision the not too distant future (see Figure 43). They are asked to select an ending for the following statement, “In 2030, the social, political, economic, and environmental state of the world will be...” The answers are presented on a Likert scale. No respondents choose the answer “significantly deteriorated.” Most of the respondents (79%) choose one of the positive answers. “Steadily improving” has 46% and “significantly improved” garners 33% of the responses.

Figure 44

Visual Analogy of Data – June 28



Table 37

Summary of Descriptive Data by Group

	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16	Group 17	Group 18
Females	1	1	2	4		4	4	5
Males	4	5	3	2	4	1	2	1
Canada			1	2		1	1	2
Kenya	1	3		1	2		3	1
Thailand	4	3	4	3	2	4	2	3
Group Topic	TVET	Health	Health	Health	HEiE	Health	K-12	K-12
Total Chats	167	373	39	264	79	458	1130	368
SP Count	283	405	57	448	117	811	1387	423
AF Percent	20	27	18	15	16	26	23	16
IN Percent	38	49	42	47	39	38	42	42
CO Percent	42	24	40	38	44	36	36	42
Mean Grade	79.0	74.6	80.5	85	85.6	84.5	75.4	80.4

Figure 44 shows the total social presence for each of the eight groups at the end of the course, June 28. It is displayed with Table 37 on the same page to complete the summary of the descriptive data as distributed by group. The intention behind using a visual analogy is to be able to compare observable measures between groups. While being aware of the volume of messages containing demonstration of social presence (i.e. size of each group's illustrated image), the emphasis is on the comparison parts being illustrated. I wondered if I could predict, by looking at the data that determined the areas of the pink outer crescent and the orange inner circle, whether the mean final grade for a group would be above or below the mean average grade for the class.

The orange inner circle (AF Percent) represents the percentage of demonstrations of affective social presence as a ratio of the total demonstrations of social presence (SP Count – represented by the entire area bound by the outer circle which adds the orange inner circle, grey inner crescent, and pink outer crescent). Similarly, the pink outer crescent (CO Percent) is the ratio of cohesive social presence as a ratio of SP Count. Comparisons between the illustrations could only be blunt, such as comparing the proportional area of the orange inner circle between groups, e.g. this comparison for Group 14 is considerably smaller than that of Group 12. A proportionally smaller orange circle (AF Percent) is more favourable for predicting a high grade as identified by the regression analysis in *Chapter Four*. Iteratively doing these blunt comparisons between each of the groups could produce a ranking of the groups from most favourable to least on the basis of AF Percent and then repeating the process for CO Percent. Table 38 summarizes these comparisons, labeling them “Rank by AF Percent” and “Rank by CO Percent” respectively.

Table 38*Summary of Ranked Comparisons of Groups*

	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16	Group 17	Group 18
Rank by AF Percent	4	7	3	1	2 ^a	6	5	2 ^a
Rank by CO Percent	2 ^a	6	3	4	1	5 ^a	5 ^a	2 ^a
Cumulative Rank	6 ^b	13	6 ^b	5	3	11	10	4
Final Adjusted Rank	5	8	4	3	1	7	6	2
Predicted Half of Class by Grade	Bottom	Bottom	top	top	top	Bottom	Bottom	top
Mean Grade of Each Group	79.0	74.6	80.5	85	85.6	84.5	75.4	80.4
Group Mean Grade Compared to Class mean of 80.3	Below	Below	Above	Above	Above	Above	Below	Above
Prediction Aligned With Group Grade	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

^a Groups with the same percentage were given the same comparative rank.

^b Groups with the same cumulative rank are differentiated by weighting the rank of CO Percent as having a stronger influence than AF Percent over predicting the final grade as identified by the regression analysis in *Chapter Four*.

Only the pink and orange parts of the illustrations are used in the comparisons for ranking. Based on the regression analyses these two factors together are significant in predicting final grade. The first ranking of the groups uses the percentage of affective demonstrations of social presence (AF Percent); the lower the AF Percent, the higher the rank. The second ranking of the groups uses the higher the CO Percent, the higher the rank. For each group these two rankings are added and then the cumulative totals are ranked. These are labeled in Table 38 as “Cumulative rank.” There are two groups (11

and 13) with the same cumulative rank. To differentiate the ranking between them, the value of CO Percent is crudely weighted as being a stronger factor in predicting final grade than AF Percent. (A more precise weighting is found in the unstandardized Beta identified in the regression analysis in *Chapter Four*.). The adjusting rankings are labeled, “Final adjusted rank” The groups ranked 1 to 4 are listed as top in the row labeled “Predicted half of class by grade,” and the groups ranked 5 to 8 are listed as bottom.

The actual mean grades for each group are identified as above or below 80.3%, the mean average grade for the class. This approach correctly predicts that Groups 13, 14, 15, and 18 achieve above-average grades and that Groups 11, 12, and 17 achieve below-average grades. There is one incorrect prediction, that for Group 16, which achieved above-average grades. I was happy to see that my blunt comparisons of the pink and orange parts of these visual analogies were successful in predicting the above-average and below-average grades for seven out of the eight groups.

Chapter Five Summary

I say “happy” because statistical analysis at the group level failed to meet statistical assumptions for regression analysis, meaning a precise calculation could not be identified. Thus, I use a “blunt” comparison of proportional size of demonstrations of affective and cohesive social presence. While logically sound, it is a blunt not precise mathematical comparison. I took a leap of faith and it ended well. This supports a practical use of percentage of affective and cohesive demonstrations of social presence as a predictor of final grade.

I say “happy” also because in choosing to my mixed methods, I desire to push the boundaries of visual expressions of data that are still illustrative. My own range of visual art experience is from civil engineering draughting in which the way an arrow- head is draw to a steel beam formed part of the legal contract between engineer and builder, through to expressionist painting. The engineering drawings communicate within precise industry-specific language while the paintings are boundless stirrings of emotions. The illustrations included in this dissertation fall somewhere between those two extremes. I do not deny my emotional connection to the images. I had a unique emotional rush during a sound and video check of projecting my three-minute film on multiple 15-foot tall screens in a Convention Centre Dublin hall, the day before my lightning talk presentation at ICDE 2019. I have presented at conferences in large halls with multiple screens, but this was the first time I was able to look at my creative work from the technical booth and really “see” it for the first time. I saw the choices of font, colours, images, lightness, darkness, words, music, and silence, all coming together to convey succinct points about my research.

It was an unplanned choice to evolve the design of the visual analogy from a representational visual form of a flowering plant to a more abstract one. The evolution was a result of the process of my mindful practice. It was successful at conveying simplicity of interpretation of the data and findings drawn from the real world complexities in which learners socially interact with each other. Part of my happiness in achieving this simple portrayal was in knowing the vast amount of hard work upon which they are drawn.

Chapter 6. Discussion and Conclusion

The previous two chapters of findings are structured differently. *Chapter Four* presents statistical findings without discussion. *Chapter Five*, being first-person reflections, includes findings and select discussions relating to *Chapter Four*. This, the final chapter, solidifies the strength of this study to fulfill its purpose through successfully aligning with the course being studied, executing the methodology, and meeting the ethical goals. This chapter proposes the significance of this study and future research; and ends with a summary of the key findings. This chapter ties the conclusions in each of these areas to practical applications.

Alignment of Study and Course Being Studied

The learners in this action study were enrolled in an undergraduate course that was designed to foster the social construction of knowledge through interactions between socio-culturally diverse learners. The course subject was education and international development and the learners were refugees living in Thailand and Kenya, and non-refugees living in Canada. The interventionary action of this study was to deploy WhatsApp, a mobile instant messaging app, for the formal online course discussions. This action research focuses firstly on increasing equitable sustained access to online course communications, and secondly on investigating the nature of those communications. The scope of the research investigates those messages as they relate to the concepts of social presence and final grade in the course. This study is strongly aligned with the course design to foster communication between learners from different international contexts.

Executed Methodology

I experience the world through my perception of reality. It is a singular perspective. One that is influenced by my socio-cultural milieu, which is different from the contexts of the learners in this study. This study validates my first-person perspective as a lens through which to understand the mobile instant message communications between learners in this international multi-site university course in which some of the learners were persons of concern. Upon reflection, it is intellectually and personally satisfying that my key findings echo my research paradigm. My research approach values the view of the individual researcher as able to contribute to the collective good, specifically to find universal intent from qualitative reflections and to contribute content to open data repository.

This action research follows the three steps to act, observe, and reflect. Choosing from the various models of action research, this study completes the J. McNiff and Whitehead (2011) question, “I wonder what would happen if...?” (p. 56) with a pitch to the course professor to use WhatsApp mobile instant messaging to address inequitable access to learner online discussion forums. Three main research questions guide the understanding of this interventionary action. The first two are, “What are the experiences of the researcher designing, conducting, and disseminating this researcher study?” and “What are the experiences of the researcher releasing the source data of this study openly?” These are answered through first-person reflections using words, numbers, and visual images.

The inclusion of arts-based reflections is aligned with my personal epistemology. Drawing and painting are significant components in sense making throughout this study.

Following J. McNiff and Whitehead's (2011) advice, common sense is used to select the examples of art to include in this dissertation (p. 135). The process of executing and analyzing the visual analogy in a realistic and then abstract style of rendering of the study data fulfills J. G. Knowles & Promislow's (2008) encouragement to use arts-based research to go beyond habitual thinking (p. 517). The process allows me to mindfully pay attention to the data, and then test its practical use, by successfully using the visual depictions to predict the academic performance for seven of the eight groups. Visual art creation in this study is successful, while acknowledging Sturken and Cartwright's (2001) caveat that an image can change every time it is viewed (p. 25), meaning the visual experiences of this study and its ontology may be in continual flux and may never fully resolve.

The third research question embeds a statistical examination of the observable data into the reflection step. The question is, "What is the relationship between the demonstration of social presence in course-related mobile instant messages and the final grade for higher education learners in this course?" This is explored through statistically analyzing 31,658 coded data points from the learners' chat messages. It was hoped that this research question could be explored for the whole class as one case, and then parsed into smaller cases by the two genders, three locales, and eight WhatsApp groups in order to answer sub-questions of how these smaller cases compare to the findings of the larger case of the whole class. As the number of participants is significantly lower than projected at the design of this study, the sub-question cases are too small to meet the assumptions of statistical correlation through to regression analysis. The statistical

analysis of the case of the whole class does render useful results, which will be discussed in the findings section below.

Ethical Issues and Resolution

I achieved my ethical targets to fulfill ethical guidelines in conducting human research to do no harm and comply with research ethics requirements at Athabasca University and York University. A personal ethic that developed over the course of this study has been to avoid sensationalizing the fragile context in which the Kenya-based and Thailand-based learners were living while enrolled in this course. The story of this action study is not mine. I take care to tell it respectfully, without sensationalism. Additionally, I limit the first-person disclosures about me to only that which is necessary to understand my positionality. Otherwise, my reflections focus on the details of the study.

Turton (1996) states that research into others' suffering can only be justified if alleviating that suffering is an explicit objective (p. 96). This study's interventional action was to remove a barrier to communication between refugee and non-refugee learners in the EDUC 3711 course. I then studied the consequences of that action in a non-intrusive manner, through observation of those communications. These study design choices are explicitly tied to my ethical goals for conducting this research.

Identified Limitations

There are two unexpected limitations. One derives from the labour dispute involving the teaching assistants at York University causing a restructuring of the WhatsApp groups to be student-led without any teaching assistants in the groups. The other derives from a distrust to participate in research following the Cambridge Analytica

data breach, resulting in lower than anticipated participation rates. Subsequently, data analysis could not be conducted at the intended levels of gender, locale, and groups. Fortunately, the study obtained sufficient data to conduct significant analysis at the class level. The remaining limiters were known at the design phase of this study.

Another limitation is the socio-cultural background of the two coders being different from the participants'. There may be some linguistic misinterpretations in the coding of participants' messages. Like the assumptions of this study, the limitations are stated explicitly in order to be transparent about the design. Releasing the original messages openly allows for researchers from within the cultures represented by the study participants to conduct their own coding and analysis of the messages.

Another limitation is that this study cannot be statistically generalized. Understanding this, the study aims for transferability beyond the context of the one class under investigation. The key findings, discussed later in this chapter, transgress this limitation and are useful to researchers and education practitioners.

Identified Delimitations

The delimitations of this study result from decisions to make the scope manageable. Arts-based first-person action research is context specific. The aim is to find universal intent to contribute to the related research and practice discourses. The choice to use learner-generated MIM chat messages as data, excludes data from other avenues of communication between learners. The choice to code data for social presence is relevant to the course's original design and the interventionary action. One delimitation is not related to the design paradigm but related to my monolingual skills as the primary researcher. After reading English abstracts of relevant non-English articles, I investigated

the possibility of translating articles into English, which proved too costly for me. A delimitation of this study is that literature review is of works published in English. All the delimitations were known at the outset of the research design.

Reflection on Significance

A few areas of possible significance, identified at the start of this study, were that the study would provide a unique understanding within the gap of research on higher education in emergencies; contribute one more study in the areas of social presence and arts-based research; and contribute anonymous de-identified data to an internationally searchable repository of open data. After finishing the research, I reflect on the details of what I think may be significant in this study. Within my home institution, Athabasca University, I may have paved the way for other researchers to obtain ethical approval to openly release their data in perpetuity for unlimited secondary use, by sharing language from my consent form and ethics application that can easily be adapted to other studies. The impact of openly releasing research data on vulnerable populations that are difficult to access has the potential to contribute significantly to the increase of research on such populations without increasing the risk or burden to the participants, as they have consented to unlimited secondary use.

This data documents authentic communications of learners who are persons of concern. An unintended outcome of the York labour dispute was that the communications between learners in the WhatsApp groups were led by the learners and took place independent of the teaching team. My involvement was logistic facilitation of the groups, not instruction. This makes this collection of data valuable to explore to future researchers wishing to investigate university course discussions without the

instructor. The statistical findings describe the correlation of grades to social presence indicators. Each area of significance listed above is a small but valuable contribution to the respective discourses.

Future Research

My study may generate future research by building upon my dissertation or my processes. The following are gaps in my study that are potential areas of further research:

- Broadening the key areas of the literature review to non-English include publications, to see if any of the noted trends would be different from those I have reported.
- Secondary use of open data: Using coders who are from within the cultures of the study participants to re-code and then re-analyze the data.
- Secondary use of open data: Adding my data to other data to form a significantly large data set, in order to pursue research questions that can be generalized.
- Secondary use of data: Pursuing research questions different from mine, e.g. code and then analyze the data for all three CoI presences, or perform a different type of content analysis, or use a different model of social presence to see how the practical outcomes differ from this study's.
- Investigating learners' participation in discussions beyond the platforms used in formal higher education courses in terms of the learners' academic agency to freely set and pursue academic goals (MacIsaac et al., 2020, p. 157).

Some of my processes may be useful to other researchers. One is adding a step to negotiated coding. The step is to identify and report unambiguous mistakes; and then remove the mistakes from the list of coding differences that the coders need to negotiate. This lessens the time needed for negotiation, and parses more detailed information in the

study's report. Another is the statistical approach to see if a single result at the significance level of p value $<.05$ can be identified as part of a pattern of results identified using p value of $<.10$. *Chapter Four* details my use of $.10$ while still favouring $.05$. These are speculations, as I cannot predict how others might conduct future research.

Reflections on Key Findings

This study has eight key findings. The first three relate to the use of MIM for online discussions. The first key finding is that Mobile Instant Messaging (MIM) can successfully be used to increase and sustain course related communications between learners in formal education. This can be achieved without the problems listed in the systematic reviews by Pimmer and Rambe (2018) and Tang and Hew (2017) (see *Chapter Two*).

The second key finding is that MIM can be used ethically within the parameters of TCPS-2 and INEE. The responsibility for lessening the risks to the learners can be shared by the teaching team and the participants. *Chapter Five* details the steps taken in this study to garner commitment on the part of participants to protect the privacy of all participants.

The third is that substantial participation in online course discussions can occur without attributing a component of the final grade to online participation. *Chapter Two* expounds on how this is contrary to prevailing practice. Voluntary participation increases the learner's agency to freely choose how to communicate in the course. Voluntary participation may also reduce the problem Kay (2006) identifies in learners' reporting the quality of online course discussions being "diluted with messages not related to curriculum because online participation was a component of the grade" (p. 769).

The fourth finding is that the creation of visual art can be a valuable component of sense making in academic research. I am often let down by the manner in which data and findings are visually represented in academic publications and aim to push the boundaries of my illustrations in this study. For me the act of drawing in this study is, in itself, an analogy to conducting this study. When I draw, I am aware that by my act of pulling a pencil across paper, a visible mark is made. Painting is a similar act as I pull paint to where I want it to flow and eventually dry, the physics and chemistry of liquid paint means that I do this with noticeably less control than using a pencil. The Oxford English Dictionary traces the etymology of the verb *draw* to Old English and Old Norse sense of *pull* (Oxford University Press, 2020). It is to act upon a thing that exists, in order to move it. In art this action makes an aspect of that thing more visible, without presuming to convey the entirety of that thing; only part of it is pulled. In my working with visual art forms, I seek to go beyond the habitual production of academic charts, and pull out aspects of my data and findings so as to expand my understanding of them.

The included examples of my visual art result from my mindful research practice. One example is borrowing from other visual disciplines to apply to academia, such as creating a hand drawn film as my vehicle for introducing my research (MacIsaac, 2019). Another example is creating a new form of visual analogy to graphically chart numeric data. These renderings are complex to execute but achieve the visual simplicity necessary to make it possible to use them to predict top half and bottom of the class.

The fifth finding is the boilerplate language to help researchers obtain ethical approval to openly release data for unlimited secondary use. The full text is in *Chapter Five*. That chapter also presents my approach to establishing what, where, and why data

would be released openly. These may be of use to future researchers considering openly releasing their data and wishing to do so ethically.

Findings six through eight are derived from the statistical analysis. In pursuit of findings that can inform practice, this study reveals three observations that can relate to instructors identifying learners at risk of poor final grades. The first observation is that the messages communicated by learners do not correlate to final grade. *Chapter Five* shows how this finding fits within a spectrum of contradictory research. This finding encourages instructors to use observable qualities of learner-authored messages to identify learners who are at-risk of poor grades. Findings seven and eight are two such gauges.

The seventh and eighth key findings isolate social presence indicators that can be used to predict academic success in this course. The seventh key finding is that learners in the top half of the class used group references in at least 28% of their total sent messages. Translating this into a practical recommendation is that an instructor may want to reach out to a learner who is using group references in less than a quarter of messages. Remembering that this study investigates correlation and not causation, the value of this finding is not to encourage, or require learners to communicate using group references, but for the instructors to use low use of group references as a red-flag that a learner may be in need of extra supports to be successful in the course. The seventh key finding is a simple gauge.

The eighth key finding is a more complex gauge as it isolates two categories of indicators together that can be used to predict final grade of learners: (1) the ratio of messages demonstrating affective social presence to the total number of messages

demonstrating social presence is a negative indicator for academic achievement and (2) the ratio of messages demonstrating cohesive social presence to the total number of messages demonstrating social presence is a positive indicator for academic achievement.

My formulas in *Chapter Four* are accurate but have little practicality for an educator in the middle of teaching a course. Descriptively analyzing the data identifies one affective indicator and two cohesive indicators that are connected to academic performance. Learners in the top half of the class express less self-disclosure and more group references and phatic messages as a percentage of the total messages sent expressing social presence. I end this chapter by distilling these three indicators and their positive or negative impact into a practical adage that the top students send messages like, “Hey, enough about me. Let’s talk about the project.”

References

- Abdi, F. A. (2016). Behind barbed wire fences: Higher education and twenty-first century teaching in Dadaab, Kenya. *Bildhaan, An International Journal of Somali Studies*, 16(1), 1621-1635.
- Aburezeq, I. M., & Ishtaiwa, F. F. (2013). The impact of WhatsApp on interaction in an Arabic language teaching course. *International Journal of Arts & Sciences*, 6(3), 165-180.
- Adelman, C. (1993). Kurt Lewin and the origins of action research. *Educational Action Research*, 1(1), 7-24. <https://doi.org/10.1080/0965079930010102>
- Ahmed, M. M. A. (2003). *Sudanese refugee women becoming activists: The role of popular education* (UMI No. 3110463) [Doctoral dissertation, University of Massachusetts]. ProQuest Dissertations and Theses Global.
- Ahonen, A. K., & Kinnunen, P. (2015). How do students value the importance of twenty-first century skills? *Scandinavian Journal of Educational Research*, 59(4), 395-412. <https://doi.org/10.1080/00313831.2014.904423>
- Akyol, Z., & Garrison, D. R. (2008). The development of a community of inquiry over time in an online course: Understanding the progression and integration of social, cognitive and teaching presence. *Journal of Asynchronous Learning Networks*, 12(3-4), 3-22.
- Alencar, A. (2018). Refugee integration and social media: A local and experiential perspective. *Information, Communication & Society*, 21(11), 1588-1603. <https://doi.org/10.1080/1369118X.2017.1340500>

- Alvis, S. (2016). Why Should Higher Education Care About Global Learning?
Agricultural Education Magazine, 89(2), 8-9.
- Alzahrani, M. G. (2017). Effect of using online discussion forums on students' learning.
Turkish Online Journal of Educational Technology, 16(1) 164-176.
- American Psychological Association. (2011). *Publication manual of the American Psychological Association*.
- Anderson. M. B. (1999). *Do no harm: How aid can support peace — or war*. Lynne Rienner Publishers.
- Anderson, T. (2008). Teaching in online learning context. In T. Anderson (Ed.), *The Theory and Practice of Online Learning* (2nd ed., pp. 343-365). AU Press.
- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). *Journal of Asynchronous Learning Networks*, 5(2), 1-17.
- Angelaki, C., & Mavroidis, I. (2013). Communication and social presence: The impact on adult learners' emotions in distance learning. *European Journal of Open, Distance and E-Learning*, 16(1), 78-93.
- Annand, D. (2011). Social Presence within the Community of Inquiry framework. *The International Review of Research in Open and Distance Learning*, 12(5), 40-56.
- Arbaugh, J. B. (2000). An exploratory study of the effects of gender on student learning and class participation in an internet-based MBA course. *Management Learning*, 31(4), 503-519.
- Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. P. (2008). Developing a Community of Inquiry instrument:

- Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *Internet and Higher Education*, 11(3), 133–136.
- Argyle, M., & Dean, J. (1965). Eye contact, distance and affiliation. *Sociometry*, 28(4), 289-304.
- Aristorenas, M. R., O’Keeffe, P., & Abu-Amsha, O. (2018). Jamiya Project 2016: Reconnecting refugee higher education networks. In E. Sengupta & P. Blessinger (Eds.), *Innovation in Higher Education Teaching and Learning: Vol. 13. Strategies, policies and directions for refugee education* (pp. 129-141). <https://doi.org/10.1108/S2055-364120180000013008>
- Armellini, A., & De Stefani, M. (2016). Social presence in the 21st century: An adjustment to the Community of Inquiry framework. *British Journal of Educational Technology*, 47(6), 1202-1216. <https://doi.org/10.1111/bjet.12302>
- Art for Refugees in Transition. (2015). *Art for refugees in transition*. <http://www.artforrefugees.org/about>
- Bagnoli, A. (2009). Beyond the standard interview: The use of graphic elicitation and arts-based methods. *Qualitative Research*, 9(5), 547–570.
- Baines, E. K. (2001). *Respect our rights: Partnership for equality. Report on the dialogue with refugee women*. UNHCR. www.unhcr.org/3bb44d908.pdf
- Barone, T., & Eisner, E. (1997). Arts-based educational research. In R. M. Jaeger (Ed.), *Complementary methods for research in education* (2nd ed., pp. 73-94). AERA.
- Barthes, R. (1977). *Image music text* (S. Heath trans.). Fontana Press.
- Bates, A. W. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning*. Tony Bates Associates Ltd.

- Bates, A. W., & Poole, G. (2003). *Effective teaching with technology in higher education: Foundations for success*. Jossey-Bass.
- Bentz, V. M., & Shapiro, J. J. (1998). *Mindful inquiry into social research*. Sage.
- Berger, J. (1972). *Ways of seeing*. Penguin.
- Berger, P. L., & Luckmann, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. Penguin Books.
- Berghel, H. (2018). Malice domestic: The Cambridge Analytica dystopia. *Computer* 51(5), 84-89. <https://doi.org/10.1109/MC.2018.2381135>
- Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Walseth, P. A., Fiset, M., & Huang, B. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of educational research*, 74(3), 379-439.
- Bhavnani, A., Chiu, R. W., Janakiram, S., & Silarszky, P. (2008). *The role of mobile phones in sustainable rural poverty reduction*. World Bank ICT Policy Division, Global Information and Communications Department.
<http://documents1.worldbank.org/curated/en/644271468315541419/pdf/446780WP0Box321bile1Phones01PUBLIC1.pdf>
- Biocca, F., Burgoon, J., Harms, C., & Stoner, M. (2001). Criteria and scope conditions for a theory and measure of social presence. *Media Interface and Network Design Labs*.
https://www.researchgate.net/publication/239665882_Criteria_And_Scope_Conditions_For_A_Theory_And_Measure_Of_Social_Presence

- Bokova, I. (2011, May 16). *Address by Irina Bokova, Director-General of UNESCO on the occasion of the UNESCO Global Forum Rankings and Accountability in Higher Education: Uses and Misuses*. Presented at the United Nations Educational, Scientific, and Cultural Organization Headquarters. Paris, FR.
<http://unesdoc.unesco.org/images/0019/001924/192417m.pdf>
- Boochani, B. (2018). *No Friend but the Mountains: Writing from Manus Prison*. (O. Tofghian, Trans.). Picador.
- Borderless Higher Education for Refugees. (2017). *Academic programs*.
http://www.bher.org/academic_programs/
- Bower, J. L., & Christensen, C. M. (1995). Disruptive technologies: Catching the wave. *Harvard Business Review*, 73(1), 43-53.
- Boyer, R. R. (2016). *Experiences of online presence: Teaching, social, and cognitive presence in a participant facilitated and product oriented course* (Order No. 10132064) [Doctoral dissertation, George Mason University]. ProQuest Dissertation and Theses Global.
- Bruhn, E. (2017). Towards a framework for virtual internationalization. *International Journal of E-Learning & Distance Education*, 32(1), 1-9.
- Buck, P., & Silver, R. (2012). *Educated for change? Muslim refugee women in the west*. Information Age.
- Burns, M., & Lawrie, J. (Eds.). (2015). *Where it's needed most: Quality professional development for all teachers*. New York, NY: Inter-Agency Network for Education in Emergencies.

- Buscher, D. (2010). Refugee women: Twenty years on. *Refugee Survey Quarterly*, 29(2), 4–20. <https://doi.org/10.1093/rsq/hdq024>
- Cadwalladr, C., & Graham-Harrison, E. (2018, March 17). Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach. *The Guardian*. <https://www.theguardian.com/news/2018/mar/17/cambridge-analytica-facebook-influence-us-election>
- Cam, S. S., Yarar, G., Toraman, C., & Erdamar, G. K. (2016). The effects of gender on the attitudes towards the computer assisted instruction: A meta-analysis. *Journal of Education and Training Studies*, 4(5), 250-261.
- Campbell, S. P. (2017). Ethics of research in conflict environments. *Journal of Global Security Studies*, 2(1), 89–101. <https://doi.org/10.1093/jogss/ogw024>
- Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada. (2014). *Tri-Council policy statement 2: Ethical conduct for research involving humans*. Secretariat on Responsible Conduct of Research. <https://www.cmcc.ca/Tri-Council%20Policy%20Statement.pdf>
- Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada. (2018). *Tri-Council policy statement 2: Ethical conduct for research involving humans*. Secretariat on Responsible Conduct of Research. <https://ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf>
- Caniglia, G., John, B., Bellina, L., Lang, D. J., Wiek, A., Cohmer, S., & Laubichler, M. D. (2018). The glocal curriculum: A model for transnational collaboration in

- higher education for sustainable development. *Journal of Cleaner Production*, 171, 368-376. <https://doi.org/10.1016/j.jclepro.2017.09.207>
- Caspi, A., & Blau, I. (2008). Social presence in online discussion groups: Testing three conceptions and their relations to perceived learning. *Social Psychology Education*, 11(3), 323-346. <https://doi.org/10.1007/s11218-008-9054-2>
- Celestina, M. (2018). Between trust and distrust in research with participants in conflict context. *International Journal of Social Research Methodology*, 21(3), 373-383. <https://doi.org/10.1080/13645579.2018.1427603>
- Chiose, S. (2018, June 20). Distance-education program breaks barriers for refugees; In Kenya's Dadaab camp, York University initiative seeks to equip displaced people with the tools to escape poverty and rebuild their communities. *Globe & Mail*. A9. <https://www.theglobeandmail.com/canada/article-york-universitys-distance-education-program-breaks-barriers-for/>
- Christen, S., Kelly, S., Fall, L., & Snyder, L. G. (2015). Exploring business students' communicative needs: Social presence in effective online instruction. *The Journal of Research in Business Education*, 57(1), 31-46.
- Christensen, C. M., Raynor, M., & McDonald, R. (2015). Disruptive innovation? Twenty years after the introduction of the theory, we revisit what it does - and doesn't - explain. *Harvard Business Review*, 93(12), 44-53.
- Cilesiz, S. (2009). Educational computer use in leisure contexts: A phenomenological study of adolescents' experiences at Internet cafes. *American Educational Research Journal*, 46(1), 232-274.

- Clarke, A., & Bautista, D. (2017). Critical reflection and arts-based action research for the educator self. *Canadian Journal of Action Research*, 18(1), 52–70.
- Cleveland-Innes, M., & Campbell, P. (2012). Emotional presence, learning, and the online learning environment. *International Review of Research in Open and Distance Learning* 13(4), 269-292.
<http://www.irrodl.org/index.php/irrodl/article/view/1234>
- Cobb, S. C. (2009). Social presence and online learning: A current view from a research perspective. *Journal of Interactive Online Learning*, 8(3), 241–254.
- Coghlan, D. (2013). What will I do? Toward an existential ethics for first person action research practice. *International Journal of Action Research*, 9(3), 333–352.
- Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Routledge.
- Collaborative Online International Learning. (2017). *COIL website*. <http://coil.suny.edu>
- Collins, A., & Halverson, R. (2009). *Rethinking education in the age of technology: The digital revolution and the schools*. Teachers College Press.
- Collins, K. (2015, March 1). Vodafone 'Instant Classroom' is digital school in a box for refugees. *Wired UK*. <http://www.wired.co.uk/news/archive/2015-03/01/vodafone-instant-classroom>
- Commonwealth of Learning. (2015). *Lifelong learning for farmers*.
<https://www.col.org/programmes/lifelong-learning-for-farmers>
- Connected Learning in Crisis Consortium. (2019). *About Us*.
<http://www.connectedlearning4refugees.org/about-us/#about-members>
- Conquergood, D. (1988). Health theatre in a Hmong refugee camp: Performance,

- communication, and culture. *TDR: The Drama Review*, 32(3), 174-208.
<https://doi.org/10.2307/1145914>
- Conrad, D., & Openo, J. (2018). *Assessment strategies for online learning: Engagement and authenticity*. Edmonton, AB: AU Press.
- Cook, S., & Germann, C. (2010). *The tell-tale data: Virtual whispering and final student grades*. <https://eric.ed.gov/?id=ED508149>
- Corey, S. M. (1953). *Action research to improve school practices*. Columbia Teachers' College
- Crang, M. (1998). *Cultural geography*. Routledge.
- Cranitch, M. (2014). Update on the Thai Burma refugee program. *ACU: News*.
<https://www.acu.edu.au/giving-to-acu/what-you-can-support/acu-refugee-program-on-the-thai-burma-border>
- Cranitch, M., & MacLaren, D. (2018). Building intellectual capacity for Burma. In E. Sengupta & P. Blessinger (Eds.), *Innovation in Higher Education Teaching and Learning: Vol. 13. Strategies, policies and directions for refugee education* (pp. 263-277). <https://doi.org/10.1108/S2055-364120180000013018>
- Creative Commons. (2018). *Creative Commons*. <https://creativecommons.org>
- Creswell, J. W. (2014). *Research Design: Qualitative, quantitative, and mixed methods approaches* (4th ed., pp. 949-962). Sage.
- Crosas, M. (2011). The Dataverse network: An open-source application for sharing, discovering and preserving data. *D-Lib Magazine*, 17(1/2).
<https://doi.org/10.1045/january2011-crosas>

Dahya, N., & Dryden-Peterson, S. (2017). Tracing pathways to higher education for refugees: The role of virtual support networks and mobile phones for women in refugee camps. *Comparative Education*, 53(2), 284-301.

<http://nrs.harvard.edu/urn-3:HUL.InstRepos:30195733>

Dahya, N., Dryden-Peterson, S., Douhaibi, D., Arvisais, O., Mendenhall, M., Skinner, M., Collas, S., French, S., Nicol, C., Meyer, K., Nashon, S. M., Olow, M., Muse, A. F., Ali, A.H., Hussein, A.I., Hassan, M., Yarow, H., Gitome, J., Kandiri, J., ... MacIsaac, P. L. (2018). *In/text conversation: Transnational teacher training in refugee camps and mobile phones*. Panel presentation at the Sixty-seventh Annual Conference of the Comparative & International Education Society, Mexico City, MX.

de Freitas, E. (2008). Interrogating reflexivity: Art, research, and the desire for presence. In J. G. Knowles & A. L. Cole (Eds.), *Handbook of the arts in qualitative research* (pp. 469-483). Sage.

Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. Macmillan.

Dewey, J. (1929). *The sources of a science of education*. Liveright.

Dippo, D. (2018). *Education and International Development: EDUC 3711: Spring/Summer 2018*. [Syllabus]. York University.

Dippo, D., Orgocka, A., & Giles, W. (2013). *Feasibility study report: Reaching higher: The provision of higher education for long-term refugees in the Dadaab camps, Kenya*. The Borderless Higher Education for Refugees Partnership/York University. <http://bher.apps01.yorku.ca/wp->

[content/uploads/2013/10/BHER_Feasibility_Study_Report_February_20_2013_v4_new_org_chart_9-3-13.pdf](#)

Doscher, S., & Landorf, H. (2018). Universal global learning, inclusive excellence and higher education's greater purposes. *Peer Review*, 20(1), 4-7.

Downes, S. (2008). Places to go: Connectivism & connective knowledge. *Innovate: Journal of Online Education*, 5(1), 1-6.

<http://nsuworks.nova.edu/innovate/vol5/iss1/6/>

Downes, S. (2012, July 20). *Massively open online course are "here to stay"* [Web log post]. <http://www.downes.ca/post/58676>

Dron, J. (2007). *Control and constraint in e-learning: Choosing when to choose* (1st ed.). Idea Group Publishing.

Dryden-Peterson, S. (2011). *Refugee education: A global review*. UNHCR.

www.unhcr.org/4fe317589.html

Dryden-Peterson, S. (2015). *The education experiences of refugee children in countries of first asylum*. Migration Policy Institute.

https://www.migrationpolicy.org/sites/default/files/publications/FCD_Dryden-Peterson-FINALWEB.pdf

Duran, L. (2017). *Learner experience of silence in cohort-based distance education* (Doctoral dissertation, Athabasca University). <http://hdl.handle.net/10791/240>

Eisner, E. (2008). Art and knowledge. In J. G. Knowles & A. L. Cole (Eds.), *Handbook of the arts in qualitative research* (pp. 3-12). Sage.

- Engle, D., Mankof, C., & Carbrey, J. (2015). Coursera's introductory human physiology course: Factors that characterize successful completion of a MOOC. *International Review of Research in Open and Distributed Learning*, 16(2), 46-68.
- Fiddian-Qasmiyeh, E. (2010). "Ideal" refugee women and gender equality mainstreaming in the Sahrawi refugee camps: "Good practice" for whom? *Refugee Survey Quarterly*, 29(2), 64–84. <https://doi.org/10.1093/rsq/hdq023>
- Flora, C. B., & Flora, J. L. (2013). *Rural communities: Legacy and change* (4th ed.). Westview Press.
- Fox, R. (2002). Happy birthday. *Communications of The ACM*, 45(11), 10.
- Framework Agreement between The United Nations Educational, Scientific and Cultural Organization and The Office of the United Nations High Commissioner for Refugees. (2011, April 1). <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/BSP/images/unhcr.pdf>
- Freire, P. (1993). *Pedagogy of the oppressed* (M. B. Ramos, Trans.). Continuum. (Original work published in 1968)
- Fuchs, C. (2017). *Social media: A critical introduction* (2nd ed.). Sage.
- Garrison, D. R. (2009). Communities of inquiry in online learning. In P. Rogers, G. Berg, J. Boettcher, C. Howard, L. Justice, & K. Schenk (Eds.), *Encyclopedia of Distance Learning* (2nd ed., Vol. III, pp. 352-355). Information Science Reference.
- Garrison, D. R., & Akyol, Z. (2013). The community of inquiry theoretical framework. In G. M. Moore (Ed.), *Handbook of distance education* (pp. 104–120). Routledge.

- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education*, 2(2-3), 87-105.
- Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the Community of Inquiry framework: A retrospective. *Internet and Higher Education*, 13(1-2), 5-9.
- Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *American Journal of Distance Education*, 19(3), 133–148. https://doi.org/10.1207/s15389286ajde1903_2
- Garrison, D.R., Cleveland-Innes, M., & Fung, T.S. (2010). Exploring causal relationships among teaching, cognitive, and social presence: Student perceptions of the community of inquiry framework. *Internet and Higher Education*, 13(1-2), 31-36.
- Garrison, D. R., Cleveland-Innes, M., Koole, M., & Kappelman, J. (2006). Revisiting methodological issues in transcript analysis: Negotiated coding and reliability. *Internet and Higher Education*, 9(1), 1-8. <https://doi.org/10.1016/j.iheduc.2005.11.001>
- Gasevic, D., Adescope, O., Joksimovic, S., & Kovanovic, V. (2015). Externally-facilitated regulation scaffolding and role assignment to develop cognitive presence in asynchronous online discussions. *Internet and Higher Education*, 24, 53-65. <https://doi.org/10.1016/j.iheduc.2014.09.006>
- Gitlin, A., & Thompson, A. (2005). Foregrounding politics in action research. In B. Cooke & J. W. Cox (Eds.), *Fundamentals of action research* (Vol. III, pp. 85-

- 101). Sage. (Reprinted from *McGill Journal of Education*, 30(2), pp. 131-146, 1995)
- Globally Networked Learning. (2017). *Globally networked learning homepage*.
<http://gnl.info.yorku.ca>
- Glynn, S. M. (1991). Explaining science concepts: A teaching-with-analogies model. In S. M. Glynn, R. H. Yeany, & B. K. Britton (Eds.), *The psychology of learning science* (pp. 219–240). Lawrence Erlbaum Associates.
- Gornitzka, C. P., & da Silva, J. M. (2018). *States of Fragility 2018: Highlights*. Organisation for Economic Co-operation and Development.
https://www.oecd.org/dac/conflict-fragility-resilience/docs/OECD%20Highlights%20documents_web.pdf
- Guitierrez-Santiuste, E., & Gallego-Arrufat, M.-J. (2017). Type and degree of co-occurrence of the educational communication in a community of inquiry. *Interactive Learning Environments*, 25(1), 62-71.
- Hayashi, A., Chen, C., Ryan, T., & Wu, J. (2004). The role of social presence and moderating role of computer self-efficacy in predicting the continuance usage of e-learning systems. *Journal of Information Systems Education*, 15(2), 139–154.
- Heidegger, M. (1992). *History of the concept of time* (T. Kisiel, Trans.). Indiana University Press. (Original work published in 1925)
- Herring, S. C. (2003). Gender and power in on-line communication. In J. Holmes & M. Meyerhoff (Eds.), *The handbook of language and gender* (pp. 202-228). Blackwell.
- Hinchey, P. H. (2008). *Action research*. Peter Lang.

- Hodgkinson, H. L. (1957). Action research – A critique. *Journal of Educational Sociology, 31*(4), 137- 153.
- Hornik, S., & Tupchiy, A. (2006). Culture’s impact on technology mediated learning: The role of horizontal and vertical individualism and collectivism. *Journal of Global Information Management, 14*(4), 31–56.
- Houle, C. O. (1961). *The inquiring mind. A study of the adult who continues learning.* The University of Wisconsin Press.
- Hostetter, C., & Busch, M. (2013). Community matters: Social presence and learning outcomes. *Journal of the Scholarship of Teaching and Learning, 13*(1), 77-86.
- Hura, G. (2010). A student perspective on how online discussions should be graded. *Journal of Educational Technology Systems, 39*(2), 163-172.
<https://doi.org/10.2190/ET.39.2.f>
- Hyndman, J., & Giles, W. (2011). Waiting for what? The feminization of asylum in protracted situations. *Gender, Place & Culture: A Journal of Feminist Geography, 18*(3), 361–379.
- Ice, P., Curtis, R., Phillips, P., & Wells, J. (2007). Using asynchronous audio feedback to enhance teaching presence and students' sense of community. *Journal of Asynchronous Learning Networks, 11*(2), 3-25.
- Inter-Agency Network for Education in Emergencies. (2010). *INEE minimum standards for education: Preparedness, response, recovery.*
https://inee.org/system/files/resources/INEE_Minimum_Standards_Handbook_2010%28HSP%29_EN.pdf

- Ito, M., Gutierrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K., Schor, J., Sefton-Green, J., & Watkins, S.C. (2013). *Connected learning: An agenda for research and design*. Digital Media and Learning Research Hub.
https://dmlhub.net/wp-content/uploads/files/Connected_Learning_report.pdf
- Jabbar, S. K. (2008). *An investigation into adult education for Palestinian women refugees: A case study at the Baqa'a camp in Jordan* (UMI No. 3340570) [Doctoral dissertation, University of Missouri]. ProQuest Dissertations and Theses Global.
- Jack, V. (2017). 'There's no media for refugees': Information and communication in camps on the Thai-Burma border. *Pacific Journalism Review*, 23(2), 127-143.
- Jacobsen, K., & Landau, L. B. (2003). The dual imperative in refugee research: Some methodological and ethical considerations in social science research on forced migration. *Disasters*, 27(3), 185-206. <https://doi.org/10.1111/1467-7717.00228>
- Jahng, N. (2012). A systematic review of small-group communication in post-secondary online courses. *Journal of Open, Flexible and Distance Learning*, 16(2), 26-40.
- Jesuit Worldwide Learning. (2018). *2017 Annual report outlook 2018*.
<https://www.jwl.org/en/news/annual-reports>
- Johnson, A. P. (2002). *A short guide to action research*. Pearson.
- Johnson, R. D. (2011). Gender differences in e-learning: communication, social presence, and learning outcomes. *Journal of Organizational & End User Computing*, 23(1), 79-94. <https://doi.org/10.4018/joeuc.2011010105>
- Jok, M. J. (2013). Power dynamics and the politics of fieldwork under Sudan's prolonged conflicts. In D. Mazurana, K. Jacobsen, & L. A. Gale (Eds.), *Research Methods*

- in Conflict Settings: A View from Below* (pp. 149-165). Cambridge University Press.
- Joksimovic, S., Gasevic, D., Kovanovic, V., Riecke, B. E., & Hatala, M. (2015). Social presence in online discussions as a process predictor of academic performance. *Journal of Computer Assisted Learning, 31*(6), 638-654.
<https://doi.org/10.1111/jcal.12107>
- Kay, R. H. (2006). Developing a comprehensive metric for assessing discussion board effectiveness. *British Journal of Educational Technology, 37*(5), 761-783.
- Kemmis, S., & Di Chiro, G. (1987). Emerging and evolving issues of action research praxis: An Australian perspective. *Peabody Journal of Education, 64*(3), 101-130.
- Kershisnik, E. I. (2016). *Collaboration and critical thinking in an online chemistry environment* (Order No. 10158906) [Doctoral dissertation, Northern Illinois University]. ProQuest Dissertations and Theses Global.
- Knowles, M. S. (1970). *The modern practice of adult education; From pedagogy to andragogy*. Associated Press.
- Knowles, M. S. (1984). *Andragogy in action: Applying modern principles of adult learning*. Jossey-Bass Publishers.
- Knowles, J. G., & Promislow, S. (2008). Using an arts methodology to create a thesis or dissertation. In J. G. Knowles & A. L. Cole (Eds.), *Handbook of the arts in qualitative research* (pp. 511-525). Sage.
- Krause, U. (2017). Researching forced migration: Critical reflections on research ethics during fieldwork. *Refugee Studies Centre Working Paper Series. No. 123*.

University of Oxford.

- Kuhne, G. W., & Quigley, B. A. (1997). Understanding and using action research in practice settings. *New Directions for Adult and Continuing Education*, 73, 23-40.
- Kumi-Yeboah, A., Dogbey, J., & Yuan, G. (2017). Online collaborative learning activities: The perceptions of culturally diverse graduate students. *Online Learning*, 21(4), 5-28.
- Kupczynski, L., Brown, M., Holland, G., & Uriegas, B. (2014). The relationship between gender and academic success online. *Journal of Educators Online*, 11(1), 1-14.
- Lam, J. Y. C. (2015). Autonomy presence in the extended community of inquiry. *International Journal of Continuing Education and Lifelong Learning*, 81(1), 39-61.
- Latchem, C., & Hanna, D.E. (2001). *Leadership for the 21st century learning: Global perspectives from educational innovators*. Routledge.
- Lawler, M., Morris, A. D., Sullivan, R., Birney, E., Middleton, A., Makaroff, L., Knoppers, B. M., Horgan, D., & Eggermont, A. (2018). A roadmap for restoring trust in big data. *The Lancet Oncology* 19(8), 1014-1015.
[https://doi.org/10.1016/S1470-2045\(18\)30425-X](https://doi.org/10.1016/S1470-2045(18)30425-X)
- Lawrence, J. A., Kaplan, I., & McFarlane, C. (2013). The role of respect in research interactions with refugee children and young people. In K. Block, E. Riggs, & N. Haslam (Eds.), *Values and vulnerabilities: The ethics of research with refugees and asylum seekers* (pp. 103-126). Australian Academic Press.
- Lawrence, R. L. (2015). Dancing with the data: Arts-based qualitative research. In V.C. X. Wang (Ed.), *Handbook of research on scholarly publishing and research*

- methods*. Hersey, PA: IGI Global.
- Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues*, 2(4), 34-46.
- Li, Q. (2005a). *Computer-mediated communication and gender difference: A meta-analysis*. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, Quebec.
- <https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED490640>
- Li, Q. (2005b). Gender and CMC: A review on conflict and harassment. *Australasian Journal of Educational Technology*, 21(3), 382-406.
- <https://doi.org/10.14742/ajet.1327>
- Lin, N., Cook, K. S., & Burt, R. S. (Eds.). (2001). *Social capital: Theory and research*. Transaction.
- Liu, S. Y., Gomez, J., & Yen, C. (2009). Community college online course retention and final grade: Predictability of social presence. *Journal of Interactive Online Learning*, 8(2), 165-182.
- Lowenthal, P. R. (2017). A mixed methods examination of instructor social presence in accelerated online courses. In *Blended learning: Concepts, methodologies, tools, and applications* (Vol. II, pp. 949-963). IGI Global. <https://doi.org/10.4018/978-1-5225-0783-3.ch047>
- Lui, A. K., Tsang, P., Kwan, R., Ng, S. C., Cheung, Y. H. Y., & Choy, S. O. (2007). An evaluation framework of expertise presence in computer conferences. *British Journal of Educational Technology*, 38(6), 1020-1036.
- <http://doi.org/10.1111/j.1467-8535.2006.00690.x>

- Maber, E. J. T. (2016). Cross-border transitions: navigating conflict and political change through community education practices in Myanmar and the Thai border. *Globalisation, Societies and Education*, 14(3), 374-389.
<https://doi.org/10.1080/14767724.2016.1175923>
- MacIsaac, P. L. (2016). Finding refuge [Newspaper column]. *Athabasca Advocate*.
Archived at <https://peggy-lynn-macisaac.ca/portfolio/finding-refuge-newspaper-articles/>
- MacIsaac, P. L. (2017a). *Ethical concerns in using disruptive innovation for higher education in emergencies*. Paper presented at the Canada's Collaboration for Online Higher Education Research Fall Conference, Toronto, ON.
- MacIsaac, P. L. (2017b). *Online communications of multi-site blended learning in Toronto, Canada and refugee camps in Dadaab, Kenya*. Paper presented at the Twenty-seventh International Council for Open and Distance Education, Toronto, ON.
- MacIsaac, P. L. (2019). *Breaking into school after hours: One educator's unconventional approach to connecting refugee and non-refugee undergraduate students*. [Film presentation]. 28th International Council for Open and Distance Education (ICDE), Dublin, IE. <https://peggy-lynn-macisaac.ca/portfolio/606/>
- MacIsaac, P. L., & Doyle, K. (2017). *Crossing borders in higher Education: Empowerment Through Internationalized eLearning* [Paper presentation]. 27th International Council for Open and Distance Education, Toronto, ON.
- MacIsaac, P. L., Martin, S. B., Kubwayo, W., Wah, C., & Nanyenga, S. (2020). *Stopped Listening: Perceptions of and by resettled refugees in higher education*. *Journal*

- of Comparative & International Higher Education. 12(Winter), 154-180.
<https://doi.org/10.32674/jcihe.v12iWinter.2040>
- MacKenzie, C., McDowell, C., & Pittaway, E. (2007). Beyond ‘Do no harm’: The challenge of constructing ethical relationships in refugee research. *Journal of Refugee Studies*, 20(2), 299–319. <https://doi.org/10.1093/jrs/fem008>
- Martin, S. B. (2018). *Co-creating spaces of critical hope through the use of a psychosocial peace building education course in higher education in protracted refugee context: Kakuma Refugee Camp, Kenya* (Order No.10682380) [Doctoral Dissertation, Portland State University]. ProQuest Dissertations and Theses Global.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396. <https://doi.org/10.1037/h0054346>
- Maurin, F. (2017). *Bury Me, My love*. [mobile game]. The Pixel Hunt.
- Mazurana, D., Gale, L. A., & Jacobsen, K. (2013). A view from below: Conducting research in conflict zones. In D. Mazurana, K. Jacobsen, & L. A. Gale (Eds.), *Research methods in conflict settings: A view from below* (pp. 3-23). Cambridge University Press.
- McLuhan, M. (1962). *The Gutenberg galaxy: The making of typographic man*. University of Toronto Press.
- McLuhan, M. (1964). *Understanding media: The extensions of man*. McGraw-Hill.
- McLuhan, M., & Stern, G. E. (1967). A dialogue. In G. E. Stern (Ed.), *McLuhan: Hot & cool* (pp. 160-292). The New American Library.
- McNiff, J. (2017). *Action research: All you need to know*. Sage.

- McNiff, J., & Whitehead, J. (2002). *Action research: Principles and practice*. Routledge.
- McNiff, J., & Whitehead, J. (2011). *All you need about action research* (2nd ed.). Sage.
- McNiff, S. (2008). Arts-based Research. In J. G. Knowles & A. L. Cole (Eds.),
Handbook of the arts in qualitative research (pp. 3-12). Sage.
- McPhaul-Moore, E. (2013). *Predictors of online learning success in a rural community college* (UMI No. 3574025) [Doctoral dissertation, Northcentral University].
 ProQuest Dissertations and Theses Global.
- McTaggart, R. (1993). *Action research: A short modern history*. Deakin University Press.
- Mebane, M. E., Sorace, R., Solimeno, A., & Tomai, M. (2007). Gender differences in online collaborative learning groups promoting affective education and social capital. *Psicologia Escolar e Educacional, 11*(SPE), 27-36.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.
<https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- Mendenhall, M., Asghar, T., Bowden, L, Cha, J., Collas, S., Falk, D., French, S., Hu, S., Richardson, E., Skinner, M., & Vellani, S. (2017). *Teachers for teachers: A professional development model for teachers in extraordinary circumstances*.
<https://www.tc.columbia.edu/refugeeducation/projects/teachers-for-teachers/>
- Migrants with mobiles; Refugees and technology. (2017, Feb 11). *The Economist, 422*(51).

- Moore, M. G. (1991). Editorial: Distance education theory. *The American Journal of Distance Education*, 5(3), 1-6. <https://doi.org/10.1080/08923649109526758>
- Moore, M. G. (1994). Administrative barriers to adoption of distance education. *The American Journal of Distance Education*, 8(3), 1–4.
- Morlang, C., & Stolte, C. (2008). Tertiary refugee education in Afghanistan: Vital for reconstruction. *Forced Migration Review*, 30, 62-63.
<https://www.fmreview.org/sites/fmr/files/FMRdownloads/en/burma/morlang-stolte.pdf>
- Moser-Mercer, B. (2014). MOOCs in fragile contexts. In U. Cress & C.D. Kloos (Eds.), *Proceeding of the European MOOCs Stakeholders Summit* (pp. 114-121). Lausanne, CH.
<http://www.unige.ch/inzone/files/9514/8965/4778/MOOCsinFragileContexts.pdf>
- Murphy, T. F. (2004). *Case studies in biomedical research ethics*. The MIT Press.
- Murthy, P. (2015). *High school students' college career readiness skills in virtual and face-to-face advanced placement course settings* (Order No. 3664074) [Doctoral dissertation, Dowling College]. ProQuest Dissertations and Theses Global.
- Mykota, D. B. (2015). The influence of learner characteristics on social presence. *Procedia - Social and Behavioral Sciences*, 176. 627-632.
<https://doi.org/10.1016/j.sbspro.2015.01.520>
- Mykota, D. B. (2017). The impact of learner characteristics on the multi-dimensional construct of social presence. *The Turkish Online Journal of Educational Technology*, 16(2), 137-144.

- Mykota, D. B., & Duncan, R. (2007). Learner characteristics as predictors of online social presence. *Canadian Journal of Education*, 30(1), 157-170.
<https://doi.org/10.2307/20466630>
- Neroni, J., Meijs, C., Leontjevas, R., Kirschner, P. A., & de Groot, R. H. M. (2018). Goal orientation and academic performance in adult distance education. *International Review of Research in Open and Distributed Learning*, 19(2), 192–208.
- Nicol, C., Meyer, K., Nashon, S. M., Olow, M., Muse, A. F., Ali, A. H., Hussein, A. I., Hassan, M., Yarow, H., Karangu, P., Abdi, I., & Aden, S. (2018). *Dialogue circles through social media: Teacher education in a refugee camp*. Conference presentation at Sixty-seventh Annual Conference of Comparative & International Education Society, Mexico City, MX.
- Ngo, B., & Hansen, S. (2013). Constructing identities in UN refugee camps: The politics of language, culture and humanitarian assistance. *Critical Inquiry in Language Studies*, 10(2), 97-120. <https://doi.org/10.1080/15427587.2013.753843>
- Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *Journal of Online Learning & Teaching*, 11(2), 309-319.
- Nsamenang, A. B., & Tchombe, T. M. (2011). Introduction: Generative pedagogy in the context of all cultures can contribute scientific knowledge of universal value. In A. B. Nsamenang & T. M. Tchombe (Eds.), *Handbook of African educational theories and practices: A generative teacher education curriculum*, (pp. 5–19). Human Development Resource Centre
- Nuernberg Military Tribunals. (1949). *Trials of war criminals before the Nuernberg*

- military tribunals under Control Council Law No. 10*, (Vol. 2). U.S. Government Printing Office. http://www.loc.gov/rr/frd/Military_Law/pdf/NT_war-criminals_Vol-II.pdf
- Nusair, I. (2013). Negotiating identity, space, and place among Iraqi women refugees in Jordan. In D. Mazurana, K. Jacobsen, & L. A. Gale (Eds.), *Research methods in conflict settings. A view from below* (pp. 56-77). Cambridge University Press.
- OERu. (2018). *OERu*. oeru.org
- Olsen, P. (2014, February 2). The rags-to-riches tale of how Jan Koum built WhatsApp into Facebook's new \$19 billion baby. *Forbes*. 8.
<https://www.forbes.com/sites/parmyolson/2014/02/19/exclusive-inside-story-how-jan-koum-built-whatsapp-into-facebooks-new-19-billion-baby/?sh=7e212d322fa1>
- O'Malley, B. (2016a, March 19). Consortium to show how to scale up HE for refugees. *University World News*.
<http://www.universityworldnews.com/article.php?story=20160318210714950>
- O'Malley, B. (2016b). Protecting and providing higher education in a threatened world. In J. A. Scorza (Ed), *Higher education as a bridge to the future: Proceedings of the Fiftieth Anniversary Meeting of the International Association of University Presidents* (pp. 95-102). Fairleigh Dickinson University Press.
- OpenIDEO. (2015). *How might we improve education and expand learning opportunities for refugees around the world?* www.openideo.com

- Orr, T. (2019). *Women with depression in online learning: A descriptive phenomenological analysis* (Doctoral dissertation, Athabasca University).
<http://hdl.handle.net/10791/292>
- Osman, S. (2017). An ethical framework for conducting research involving refugees and internally displaced persons in conflict settings. In H. Silverman (Ed.), *Research ethics forum series, research ethics in the Arab region. Research ethics forum* (Vol. 5, pp. 147-159). Springer. https://doi.org/10.1007/978-3-319-65266-5_13
- Oxford University Press. (2017). Crisis. In *Oxford English Dictionary Online*.
<http://www.oed.com>
- Oxford University Press. (2020). Draw. In *Oxford English Dictionary Online*.
<http://www.oed.com>
- Packham, G., Jones, P., Miller, C., & Thomas, B. (2004). E-learning and retention key factors influencing student withdrawal. *Education + Training*, 46(6), 335–342.
- Paquette, P. F. (2009). *Virtual academic community: online education instructors' social presence in association with freshman composition students' critical thinking and argumentation* (UMI No. 3386219) [Doctoral dissertation, Auburn University]. ProQuest Dissertations and Theses Global.
- Parr, C. (2014, July 17). A MOOC makeover saves refugee course. *The Times Higher Education Supplement*, (2161).
<https://www.timeshighereducation.com/news/mooc-makeover-saves-refugee-course/2014493.article>
- Pattison, A. B. (2017). *An exploratory study of the relationship between faculty social presence and online graduate student achievement, satisfaction, and persistence*

(Order No. 10259040) [Doctoral dissertation, Grand Canyon University].

ProQuest Dissertations and Theses database.

Perkowski, J. (2012). The role of gender in distance learning: a meta-analytic review of gender differences in academic performance and self-efficacy in distance learning. *Journal of Educational Technology Systems, 41*(3), 267-278.

<https://doi.org/10.2190/ET.41.3.e>

Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence and performance in an online course. *Journal of Asynchronous Learning Networks, 6*(1), 21- 40.

Pierce, T. (2007). *Women, weblogs, and war: Digital culture and gender performativity. Three case studies of online discourse by Muslim cyberconduits of Afghanistan, Iran, and Iraq* (UMI No. 3255020) [Doctoral dissertation, Clark University].

ProQuest Dissertations and Theses Global.

Pimmer, C., & Grohbiel, U. (2013). *The affordances of social mobile media for boundary crossing*. Paper presented at Integrating Formal and Informal Learning Swiss Society for Research in Education Conference at Lugano, Switzerland.

<http://www.christoph.pimmer.info/wp-content/uploads/2008/08/Pimmer-Grohbiel-The-affordances-of-social-mobile-media-for-boundary-crossing.pdf>

Pimmer, C., & Pachler, N. (2013). Mobile learning in the workplace. Unlocking the value of mobile technology for work-based education. In M. Ally & A. Tsinakos (Eds.), *Perspectives on open and distance learning: Increasing access through mobile learning* (pp. 193-203). Commonwealth of Learning and Athabasca University.

http://www.en.copian.ca/library/research/commonwealth_of_learning/perspective/s/perspectives.pdf

- Pimmer, C., & Rambe, P. (2018). The inherent tensions of 'instant education'.
Reviewing the educational potential of mobile instant messaging. *The International Review of Research in Open and Distributed Learning* 19(5), 218-237. <https://doi.org/10.19173/irrodl.v19i5.3765>
- Pitkow, J. E., & Recker, M. M. (1995). Using the Web as a survey tool: Results from the second WWW user survey. *Computer Networks and ISDN Systems*, 27(6). 809-822. [https://doi.org/10.1016/0169-7552\(95\)00018-3](https://doi.org/10.1016/0169-7552(95)00018-3)
- Pittaway, E., & Bartolomei, L. (2001). Refugees, race, and gender: The multiple discrimination against refugee women, *Refuge, Canada's Journal on Refugees*, 19(1), 21-32.
- Pittaway, E., & Bartolomei, L. (2013). Doing ethical research: 'Whose problem is it anyway?' In K. Block, E. Riggs, & N. Haslam (Eds.), *Values and vulnerabilities. The ethics of research with refugees and asylum seekers* (pp. 151-170). Australian Academic Press.
- Pittaway, E., Bartolomei, L., & Hugman, R. (2010). Stealing our stories: The ethics of research with vulnerable groups. *Journal of Human Rights Practice*, 2(2), 229-251.
- Polanyi, M. (1958). *Personal knowledge*. Routledge.
- PR Newswire. (2017, July 19). *Southern New Hampshire University launches major refugee education initiative: Multi-million dollar project will bring U.S.-accredited degrees to refugees at home and abroad.*

<https://www.prnewswire.com/news-releases/southern-new-hampshire-university-launches-major-refugee-education-initiative-300490782.html>

- Quigley, B. A. (1997). The role of research in the practice of adult education. In B. A. Quigley & G. W. Kuhne (Eds.), *Creating practical knowledge through action research: Posing problems, solving problems, and improving daily practice* (pp. 3-22). Jossey-Bass.
- Richardson, J. C., Maeda, Y., Lv, J., & Caskurlu, S. (2017). Social presence in relation to students' satisfaction and learning in the online environment: A meta-analysis. *Computers in Human Behavior, 71*, 402-417.
<https://doi.org/10.1016/j.chb.2017.02.001>
- Richardson, J. C., & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous Learning Networks, 7*(1), 68-88.
- Rienties, B., & Rivers, B. A. (2014). Measuring and understanding learner emotions: Evidence and prospects. *Learning Analytics Review 1*.
<https://lace.apps.slate.uib.no/publications/learning-analytics-and-emotions.pdf>
- Rose, C. E. (2015). *Addressing deficit thinking in distance education: A transformative leadership approach*. Unpublished manuscript.
- Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (1999). Assessing social presence in asynchronous, text-based computer conferencing. *Journal of Distance Education, 14*(2), 51-70.

- Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (2001). Methodological issues in the content analysis of computer conference transcripts. *International Journal of Artificial Intelligence in Education*, 12, 8–22.
- Rovai, A. P. (2003). Strategies for grading online discussions: Effects on discussions and classroom community in internet-based university courses. *Journal of Computing in Higher Education*, 15(1), 89-107. <https://doi.org/10.1007/BF02940854>
- Rovai, A. P., & Barnum, K. T. (2003). On-line course effectiveness: An analysis of student interactions and perceptions of learning. *Journal of Distance Education*, 18(1), 57–73.
- Roy, R., Potter, S., & Yarrow, K. K. (2008). Designing low carbon higher education systems: Environmental impacts of campus and distance learning systems. *International Journal of Sustainability in Higher Education*, 9(2), 116-130. <https://doi.org/10.1108/14676370810856279>
- Rubin, J. (2017, October 2). Internationalizing Online Education through COIL (Collaborative Online International Learning) [Web blog post]. <https://www.icde.org/icde-blog/coil>
- Russell, T. L. (1999). *The no significant difference phenomenon: As reported in 355 research reports, summaries and papers: A comparative research annotated bibliography on technology for distance education*. The University of North Carolina Press.
- Sadki, R. (2017). *CARE gender in emergencies shadowing digital training: Recommendation for the effective use of digital learning*. CARE International.

- Saint George, T.V. (2017). *'As important to me as water': How refugees in Rome use smartphones to improve their well-being* (Master's thesis, Massey University).
<https://mro.massey.ac.nz/handle/10179/11712>
- Salkind, N. J. (2010). *Encyclopedia of research design*. Sage.
<https://doi.org/10.4135/9781412961288>
- Salloum, S. R. (2011). *Student perceptions of computer-mediated communication tools in online learning: Helpfulness and effects on teaching, social, and cognitive presence* (UMI No. 3491416) [Doctoral dissertation, The University of North Carolina]. ProQuest Dissertations and Theses Global.
- Schaufuss, T. (1939). The White Russian refugees. *The Annals of the American Academy*, 203(1), 45-54.
- Schechter, J. A. (2004). *Governing "lost boys": Sudanese refugees in a UNHCR camp* (UMI No. 3136650) [Doctoral dissertation, University of Colorado]. ProQuest Dissertations and Theses Global.
- Schmuck, R. A., & Stevenson, J. M. (2010). *Action research for higher education: Collaborative principles and practices for positive change*. Academic Press.
- Schon, D. (1983). *The reflective practitioner: How professionals think in action*. Basic Books.
- Shea, P., & Bidjerano, T. (2010). Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of a communities of inquiry in online and blended learning environments. *Computers & Education*, 55(4), 1721-1731.
<https://doi.org/10.1016/j.compedu.2010.07.017>

- Shea, P., & Bidjerano, T. (2012). Learning presence as a moderator in the community of inquiry model. *Computers & Education*, 59(2), 316-326.
<https://doi.org/10.1016/j.compedu.2012.01.011>
- Shea, P., Hayes, S., Vickers, J., Gozza-Cohen, M., Uzuner, S., Mehta, R., Valchova, A., & Rangan, P. (2010). A re-examination of the community of inquiry framework: Social network and content analysis. *Internet and Higher Education*, 13(1-2), 10-21. <https://doi.org/10.1016/j.iheduc.2009.11.002>
- Shelton, B. E., Hung, J.-L., & Lowenthal, P. R. (2017). Predicting student success by modeling student interaction in asynchronous online courses. *Distance Education*, 38(1), 59-69. <https://doi.org/10.1080/01587919.2017.1299562>
- Shields, R. M. (2006). Boundary-thinking in theories of the present: The virtuality of reflexive modernization. *European Journal of Social Theory*, 9(2), 223-237.
<https://doi.org/10.1177/1368431006063342>
- Short, J. A., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. John Wiley & Sons.
- Smith, P. J., Murphy, K. L., & Mahoney, S. E. (2003). Towards identifying factors underlying readiness for online learning: An exploratory study. *Distance Education*, 24(1), 57-67.
- Socialist Republic of Vietnam. (2007). *Decision of the Prime Minister* [No. 96/2007/QĐ-TTg]. <http://old.molisa.gov.vn/en/Pages/Detail-document.aspx?vID=510>
- Solan, A. M., & Linardopoulos, N. (2011). Development, implementation, and evaluation of a grading rubric for online discussions. *Journal of Online Learning and Teaching*, 7(4), 452-461.

- Song, L., & McNary, S. W. (2011). Understanding students' online interaction: Analysis of discussion board postings. *Journal of Interactive Online Learning*, 10(1), 1–14.
- Sontag, S. (1977). *On photography*. Doubleday.
- Sphere. (2018). *The Sphere handbook: Humanitarian charter and minimum standards in humanitarian response*. Practical Action Publishing.
www.spherestandards.org/handbook
- Sphere Project. (2011). *The Sphere Project: Humanitarian charter and minimum standards in humanitarian response*. Practical Action Publishing.
<http://www.sphereproject.org/handbook/>
- Sphere Project. (2013). *The INEE minimum standards' linkages to the Sphere minimum standards*. <http://www.sphereproject.org/resources/download-publications/?search=1&keywords=INEE&language=English&category=80&subcat-22=0&subcat-29=0&subcat-31=0&subcat-35=0&subcat-49=0&subcat-60=0&subcat-80=0>
- Spurgeon, L. P., & Moore, G. E. (1997). The educational philosophies of training and development professors, leaders, and practitioners. *Journal of Technology Studies*, 23(2), 11-19.
- State Library New South Wales. (2019). *National Biography Award – 2019 winner*.
<https://www.sl.nsw.gov.au/awards/national-biography-award/2019-winner-no-friend-mountains>
- Statista. (2017). *Most popular messaging apps worldwide as of January 2017, based on number of monthly active users (in millions)*.

<https://www.statista.com/statistics/258749/most-popular-global-mobile-messenger-apps/>

Statista. (2018). *Most popular mobile messaging apps worldwide as of July 2018, based on number of monthly active users (in millions)*.

<https://www.statista.com/statistics/258749/most-popular-global-mobile-messenger-apps/>

Statistics Canada. (2017a). *Census profile. 2016 census. York, regional municipality, Ontario and Ontario*. [Data table, Catalogue No. 98-316-X2016001].

<https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E>

Statistics Canada. (2017b). Population and dwelling count highlight tables, 2016 Census. *The Daily*. <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hltfst/pd-pl/Table.cfm?Lang=Eng&T=101&S=50&O=A>

Statistics Canada. (2018). *Education indicators in Canada: An international perspective 2017*. [Catalogue No. 81-604-X]. <https://www150.statcan.gc.ca/n1/pub/81-604-x/81-604-x2017001-eng.htm>

Stemwedel, J. D. (2005). Rubrics, roles, and successful online discussions. *Online Classroom*, (November), 3-8.

Stenbom, S. (2015). *Online coaching as a relationship of inquiry: Exploring one-to-one online education* (Doctoral thesis, Royal Institute of Technology Stockholm).

<http://www.diva-portal.org/smash/get/diva2:811750/FULLTEXT02.pdf>

Strijbos, J. W., Martens, R., Prins, J., & Jochems, W. (2006). Content analysis: What are they talking about? *Computers & Education*, 46(1), 29–48.

- Sturken, M., & Cartwright, L. (2001). *Practices of looking: An introduction to visual culture*. Oxford University Press.
- Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9(3), 115-136.
- Swan, K., Shea, P., Richardson, J. C., Ice, P., Garrison, D. R., Cleveland-Innes, M., & Arbaugh, J. B. (2008). Validating a measurement tool of presence in online communities of inquiry. *E-Mentor*, 2(24), 1-12. http://www.e-mentor.edu.pl/_xml/wydania/24/543.pdf
- Sweller, J. (2011). Cognitive load theory. In P. J. Mestre & B. H. Ross (Eds.), *Psychology of learning and motivation* (Vol. 55, pp. 37-76). Academic Press.
- Tang, Y., & Hew K. F. (2017). Is mobile instant messaging (MIM) useful in education? Examining its technological, pedagogical, and social affordances. *Education Research Review*, 21, 85-104. <https://doi.org/10.1016/j.edurev.2017.05.001>
- Tekin, A. K., & Kotaman, H. (2013). The epistemological perspectives on action research. *Journal of Educational and Social Research*, 3(1), 81-91.
- Thayalan, X, Shanthi, A., & Paridi, T. (2012). Gender difference in social presence experienced in e-learning activities. *Procedia - Social and Behavioral Sciences*, 67, 580-589. <https://doi.org/10.1016/j.sbspro.2012.11.363>
- Thomas, J. H. (1996). *Distance education for refugees: The experience using distance and open learning with refugees in Africa, 1980-1995 with guidelines for action and a directory of information*. International Extension College.
- Thompson, P., Vogler, J. S., & Xiu, Y. (2017). Strategic tooling: Technology for

- constructing a community of inquiry. *Journal of Educators Online*, 14(2), 1-8.
- Tkach, B., & Williams, A. A. (2018). Mobile (in)security? Exploring the realities of mobile phone use in conflict areas. *Information, Communication & Society*, 21(11), 1639-1654. <https://doi.org/10.1080/1369118X.2017.1348531>
- Tracey, M. W., & Richey, R. C. (2005). The evolution of distance education. *Distance Learning*, 2(6), 17-21.
- Trow, M. (2004). Comment on “Participant observation and interviewing: A comparison.” In C. Seale (Ed.), *Social research methods: A reader* (pp. 250-251). Routledge. (Original work published in 1957)
- Tu, C. H. (2002). *Computer-mediated communication (CMC) questionnaire*. <http://jan.ucc.nau.edu/~ct68/Publication/2002/CMCQ2002.pdf>
- Tu, C. H., McIsaac, M., Sujo-Montes, L. & Armfield, S. (2012). Is there a mobile social presence? *Educational Media International*, 49(4), 247–261. <https://doi.org/10.1080/09523987.2012.741195>
- Turton, D. (1996). Migrants and refugees: A Mursi case study. In T. Allen (Ed.), *In search of cool ground: War, flight, and homecoming in Northeast Africa* (pp. 96-10). Africa World Press.
- Turula, A. (2017). The shallows and the depths. Cognitive and social presence in blended tutoring. *Technology, Pedagogy and Education*, 26(2), 233-250. <https://doi.org/10.1080/1475939X.2017.1370388>
- UNESCO. (2002). *Forum on the impact of open courseware for higher education in developing countries: Final report*. <http://unesdoc.unesco.org/images/0012/001285/128515e.pdf>

- UNESCO. (2007). *UNESCO operational definition of basic education: Thematic Framework*.
- UNESCO. (2012). *Mobile learning for teachers in Africa and Middle East: Exploring the potential of mobile technologies to support teachers and improve practice*.
<https://dev1.oerafrica.org/resource/mobile-learning-teachers-africa-and-middle-east-exploring-potential-mobile-technologies>
- UNESCO. (2016). *Education for people and planet: Creating sustainable futures for all: Global education monitoring report 2016*.
<http://unesdoc.unesco.org/images/0024/002457/245752e.pdf>
- UNHCR. (1992). *Protection of persons of concern to UNHCR who fall outside the 1951 Convention*. [Discussion note EC/1992/SCP/CRP.5].
<http://www.unhcr.org/excom/scip/3ae68cc518/protection-persons-concern-unhcr-fall-outside-1951-convention-discussion.html>
- UNHCR. (2010). *Convention and protocol relating to the status of refugees*. [Original convention 1951; amended protocol 1967]
- UNHCR. (2012). *Education strategy 2012-2016*.
<https://www.unhcr.org/protection/operations/5149ba349/unhcr-education-strategy-2012-2016.html?query=education%20strategy%202012-2016>
- UNHCR. (2015a). *About us*. <http://www.unhcr.org/pages/49c3646c2.html>
- UNHCR. (2015b). *States Parties to the 1951 Convention relating to the status of refugees and the 1967 Protocol* [web page].
<https://www.unhcr.org/protection/basic/3b73b0d63/states-parties-1951-convention-its-1967-protocol.html>

- UNHCR. (2016a). *Aiming higher: The other one percent: UNHCR educational report 2016*. <http://www.unhcr.org/aiming-higher.html>
- UNHCR. (2016b). *Missing out: Refugee education in crisis*.
<http://www.unhcr.org/57d9d01d0>
- UNHCR. (2017a). *Global trends: Forced displacement in 2016*.
<http://www.unhcr.org/globaltrends2016/>
- UNHCR. (2017b). *Left behind: Refugee education in crisis*.
<http://www.unhcr.org/59b696f44.pdf>
- UNHCR. (2017c). *Persons of concern to UNHCR*. <http://www.unhcr.org/ph/persons-concern-unhcr>
- UNHCR. (2017d). *UNHCR strategic directions 2017-2021*.
<http://www.unhcr.org/5894558d4.pdf>
- UNHCR. (2018a). *Dadaab, Kenya: Operational update*. <http://www.unhcr.org/ke/wp-content/uploads/sites/2/2018/01/15-January-Dadaab-Bi-weekly-Operational-Update.pdf>
- UNHCR. (2018b). *Dadaab refugee complex*. <http://www.unhcr.org/ke/dadaab-refugee-complex>
- UNHCR. (2018c). *Global trends: Forced displacement in 2017*.
<http://www.unhcr.org/5b27be547>
- UNHCR. (2018d). Horn of Africa Somalia situation. *Operational Data Portal*.
https://data2.unhcr.org/en/situations/horn#_ga=2.72193555.1856268381.1517761033-334491174.1517761033

- UNHCR. (2018e). Population statistics. *UNHCR statistics: The world in numbers*.
<http://popstats.unhcr.org/en/overview>
- UNHCR. (2019). *Refugee Education 2030: A strategy for refugee inclusion*.
<https://www.unhcr.org/5d651da88d7.pdf>
- UNHCR. (2021, February). Thailand-Myanmar border refugee population overview—
February 2021. *Operational Portal: Refugee Situations*.
<https://data2.unhcr.org/en/documents/details/85263>
- United Nations. (2006). *No policy for progress more effective than empowerment of women, secretary-general says in remarks to Women's Day observation* [Press release]. <https://www.un.org/press/en/2006/sgsm10370.doc.htm>
- United Nations, Department of Economic and Social Affairs, Population Division.
(2017). *World population prospects: The 2017 revision* [Excel file].
<http://esa.un.org/unpd/wpp/DVD/>
- United Nations General Assembly. (1948). *Universal declaration of human rights*.
<http://www.un.org/en/documents/udhr/>
- United Nations General Assembly. (2014, August 21). *Report of the United Nations High Commissioner for Refugees: Assistance to refugees, returnees and displaced persons in Africa*. (A/69/339). <http://www.unhcr.org/54535a7d9.html>
- United Nations General Assembly. (2018). *Report of the United Nations High Commissioner for Refugees: Part II Global compact on refugees*.
https://www.unhcr.org/gcr/GCR_English.pdf
- van Halen-Faber, C., & Diamond, C. T. P. (2008). A history of the arts in educational research: A postmodern guide for readers-flaneurs. In J. G. Knowles & A. L. Cole

- (Eds.), *Handbook of the arts in qualitative research* (pp. 569-590). Sage.
- Van Schyndel, J. L. (2015). *Nursing students' perceptions of presence in online courses* (Order No. 3737835) [Doctoral dissertation, Indiana University]. ProQuest Dissertations and Theses database.
- Villar-Onrubia, D., & Rajpal, B. (2016). Online international learning. *Perspectives: Policy & Practice in Higher Education*, 20(2/3), 75-82.
<https://doi.org/10.1080/13603108.2015.1067652>
- Vladimirschi, V. (2012). *An exploratory study of cross-cultural engagement in the community of inquiry: Instructor perspectives and challenges* (Master's thesis, Athabasca University). <http://hdl.handle.net/10791/15>
- Voghoei, S., Hashemi Tonekaboni, N., Yazdansepas, D., & Arabnia, H. R. (2019). University Online Courses: Correlation between Students' Participation Rate and Academic Performance. In *2019 International Conference on Computational Science and Computational Intelligence (CSCI)*, pp.772–777.
<https://doi.org/10.1109/CSCI49370.2019.00147>
- Voghoei, S., Hashemi Tonekaboni, N., Yazdansepas, D., Soleymani, S., Farahani, A., & Arabnia, H. R. (2020). Personalized Feedback Emails: A Case Study on Online Introductory Computer Science Courses. In *ACM Southeast Conference Proceedings*. Association for Conference Machinery.
<https://doi.org/10.1145/3374135.3385274>
- Vohra, S. (2016). *How social presence on twitter impacts student engagement and learning in a grade 8 mathematics classroom* (Order No. 10123835) [Doctoral dissertation, Walden University]. ProQuest Dissertations and Theses Global.

- Vuorinen, J., Koivula, A., & Koironen, I. (2018). Trust and privacy in messaging. *IADIS International Journal on WWW/Internet*, 16(1), 56–69.
- Walther, J. B. (1992). Interpersonal effects in computer-mediated interaction: A relational perspective. *Communication Research*, 19(1), 52-90.
- Wa-Mbaleka, S. (2013). *Exploring lived experiences of teachers as instructional designers in refugee camps* (UMI No. 3564236) [Doctoral dissertation, Capella University]. ProQuest Dissertations and Theses Global.
- Wang, M., Sierra, C., & Folger, T. (2003). Building a dynamic online community among adult learners. *Education Media International*, 40(1/2), 49–61.
- Wang, Y., Fang, W. C., Han, J., & Chen, N. S. (2016). Exploring the affordances of WeChat for facilitating teaching, social and cognitive presence in semi-synchronous language exchange. *Australasian Journal of Educational Technology*, 32(4), 18-37.
- Webb, S. (2001). Towards an understanding of adults' learning stories: Gender, educational identity and social capital. In L. West, N. Miller, D. O'Reilly, & R. Allen (Eds.), *Traveller's tales: From adult education to lifelong learning and beyond* (pp. 423-427). <http://www.leeds.ac.uk/educol/documents/00002555.htm>
- Weber, S. (2008). Visual images in research. In J. G. Knowles & A. L. Cole (Eds.), *Handbook of the arts in qualitative research* (pp. 41-53). Sage.
- Wegerif, R. (1998). The social dimension of asynchronous learning networks. *Journal of Asynchronous Learning Networks*, 2(1), 34-48.
- Wells, R. S., Seifert, T. A., Padgett, R. D., Park, S., & Umbach, P. D. (2011). Why do more women than men want to earn a four-year degree? Exploring the effects of

- gender, social origin, and social capital on educational expectations. *The Journal of Higher Education*, 82(1), 1-32.
- <https://doi.org/10.1080/00221546.2011.11779083>
- Wertz, R. E. H. (2014). *Toward a new model within the community of inquiry framework: Multivariate linear regression analysis based on graduate student perceptions of learning online* (UMI No. 3636686) [Doctoral dissertation, Purdue University]. ProQuest Dissertations and Theses database.
- WhatsApp. (2017). *About WhatsApp*. <https://www.whatsapp.com/about/>
- Whitley, B. E., Jr. (1997). Gender differences in computer-related attitudes and behavior: A meta-analysis. *Computers in Human Behavior*, 13(1), 1-22.
- [https://doi.org/10.1016/S0747-5632\(96\)00026-X](https://doi.org/10.1016/S0747-5632(96)00026-X)
- Wiener, M., & Mehrabian, A. (1968). *Language within language: Immediacy, a channel in verbal communication*. Appleton-Century-Crofts.
- Wise, E., Chang, J., Duffy, T., & del Vale, R. (2004). The effects of teacher social presence on student satisfaction, engagement, and learning. *Journal of Educational Computing Research*, 31(3), 247–271.
- Women’s Commission for Refugee Women and Children. (2001). *Annual report 2000*.
- Woods, K., & Bliss, K. (2016). Facilitating successful online discussions. *The Journal of Effective Teaching*, 16(2), 76-92.
- Woolis, D. D. (2017). Communities that produce value and foster sustainable learning: The case of action for refugee educators communities of practice in development: a relic of the past or sign of the future? *Knowledge Management for Development Journal*, 13(3): 39-59.

<https://km4djournal.org/index.php/km4dj/article/view/347/448>

World Bank Group. (2016). *Tertiary education: Overview*.

http://wbgfiles.worldbank.org/documents/hdn/ed/saber/supporting_doc/brief/SABER_TED_Brief.pdf

World University Services Canada. (2013). *WUSC's 2103-2018 strategic framework:*

Summary. <http://assets.wusc.ca/WUSCwebsite/strategic-framework-summary.pdf>

World University Services Canada. (2017). *Partnership opportunities*.

<https://wusc.ca/partners/>

Wyss, V., Freedman, D., & Siebert, C. (2014). The development of a discussion rubric

for online courses: standardizing expectations of graduate students in online

scholarly discussions. *Techtrends: Linking Research & Practice To Improve*

Learning, 58(2), 99-107. <https://doi.org/10.1007/s11528-014-0741-x>

Xin, C. (2012). A critique of the community of inquiry framework. *Journal of Distance*

Education, 26(1), 1-15.

Yaghmour, S. (2012). Gender communication differences in synchronized distance

learning lectures for users aged 18-60: A systematic literature review. *Annual*

Review of Education, Communication & Language Sciences, 9, 85-90.

Yang J. C., Quadir B., Chen N. S., & Miao Q. (2016). Effects of online presence on

learning performance in a blog-based online course. *Internet and Higher*

Education, 30, 11–20. <https://doi.org/10.1016/j.iheduc.2016.04.002>

Yonemura, M. (1977). Overcoming deficit thinking in teacher education. In B. Spodek

(Ed.), *Teaching practices: Reexamining assumptions* (pp. 57- 68). National

Association for the Education of Young Children.

York University. (2018). *Grades and grading scheme*.

<http://calendars.registrar.yorku.ca/2015-2016/academic/grades/index.htm>

York University. (2021a). *Student rights & responsibilities*.

<https://oscr.students.yorku.ca/csrr>

York University. (2021b). *Mission and vision*. <https://www.yorku.ca/about/mission-and-vision/>

Zeus, B. (2012). Formalizing virtual learning spaces for refugee youth. In L. Visser, Y. L. Visser, R. Amirault, & M. Simonson (Eds.), *Trends and issues in distance education* (2nd ed., pp. 299-309). Information Age

Zhang, Z. (2011). Designing grading policy to motivate student participation in online discussion forum. *International Journal of Innovation and Learning*, 9(1), 1-20.

<https://doi.org/10.1504/IJIL.2011.037189>

Zhao, H., Sullivan, K. P. H., & Mellenius, I. (2014). Participation, interaction and social presence: An exploratory study of collaboration in online peer review groups. *British Journal of Educational Technology*, 45(5), 807-819.

<https://doi.org/10.1111/bjet.12094>

Zhao, Y., Lei, J., Yan, B., Lai, C., & Tan, H. S. (2005). What makes the difference? A practical analysis of research on the effectiveness of distance education. *Teachers College Record*, 107(8), 1836–1884.

Ziersch, A., Due, C., Arthurson, K., & Loehr, N. (2017). Conducting ethical research with people from asylum seeker and refugee backgrounds. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 1-19).

Springer. https://doi.org/10.1007/978-981-10-2779-6_50-1

Appendix A: AU Research Ethics Board Approval



CERTIFICATION OF ETHICAL APPROVAL

The Athabasca University Research Ethics Board (AUREB) has reviewed and approved the research project noted below. The AUREB is constituted and operates in accordance with the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) and Athabasca University Policy and Procedures.

Ethics File No.: 22919

Principal Investigator:

Ms. Peggy-Lynn MacIsaac, Graduate Student
Centre for Distance Education\Doctor of Education in Distance Education

Supervisor:

Prof. George Siemens (Supervisor)

Project Title:

Social Presence in an International Multi-site Blended Learning Course

Effective Date: March 14, 2018

Expiry Date: March 13, 2019

Restrictions:

Any modification or amendment to the approved research must be submitted to the AUREB for approval.

Ethical approval is valid *for a period of one year*. An annual request for renewal must be submitted and approved by the above expiry date if a project is ongoing beyond one year.

A Project Completion (Final) Report must be submitted when the research is complete (*i.e. all participant contact and data collection is concluded, no follow-up with participants is anticipated and findings have been made available/provided to participants (if applicable)*) or the research is terminated.

Approved by:

Date: March 14, 2018

, Chair
Centre for Distance Education, Departmental Ethics Review Committee

Athabasca University Research Ethics Board
University Research Services, Research Centre
1 University Drive, Athabasca AB Canada T9S 3A3
E-mail rebsec@athabascau.ca
Telephone: 780.675.6718

Appendix B: York University Human Participants Review Committee Approval



OFFICE OF
RESEARCH
ETHICS (ORE)
5th Floor, Kaneff
Tower

4700 Keele St.
Toronto ON
Canada M3J 1P3
Tel 416 736 5914
Fax 416 736-5512
www.research.yorku.ca

Certificate #:	e2018 - 100
Approval Period:	04/19/18-04/19/19

ETHICS APPROVAL

To: Professor Don Dippo
Faculty of Education

From: Sr. Manager and Policy Advisor, Research Ethics
e)

Date: April 19th, 2018

Title: Distance and Globally Networked learning in "Education and International Development"

Risk Level: Minimal Risk More than Minimal Risk

Level of Review: Delegated Review Full Committee Review

I am writing to inform you that this research project, "**Distance and Globally Networked learning in "Education and International Development"**" has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines.

Note that approval is granted for one year. Ongoing research – research that extends beyond one year – must be renewed prior to the expiry date.

Any changes to the approved protocol must be reviewed and approved through the amendment process by submission of an amendment application to the HPRC prior to its implementation.

Any adverse or unanticipated events in the research should be reported to the Office of Research ethics (ore@yorku.ca) as soon as possible.

For further information on researcher responsibilities as it pertains to this approved research ethics protocol, please refer to the attached document, "**RESEARCH ETHICS: PROCEDURES to ENSURE ONGOING COMPLIANCE**".

Should you have any questions, please feel free to contact me at: _____ or via email at: _____

Yours sincerely,

Sr. Manager and Policy Advisor,
Office of Research Ethics

RESEARCH ETHICS: PROCEDURES to ENSURE ONGOING COMPLIANCE

Upon receipt of an ethics approval certificate, researchers are reminded that they are required to ensure that the following measures are undertaken so as to ensure on-going compliance with Senate and TCPS ethics guidelines:

1. **RENEWALS:** Research Ethics Approval certificates are subject to annual renewal.
 - a. Researchers will be reminded by ORE, in advance of certificate expiry, that the certificate must be renewed
 - i. Researchers have 2 weeks to comply to a reminder notice;
 - ii. If researchers do not respond within 2 weeks, a final reminder will be forwarded. Researchers have one week to respond to the final notice;
 - b. **Failure to renew an ethics approval certificate or** (to notify ORE that no further research involving human participants will be undertaken) **may result in suspension of research cost fund and access to research funds may be suspended/withheld ;**
2. **AMENDMENTS:** Amendments must be reviewed and approved **PRIOR** to undertaking/making the proposed amendments to an approved ethics protocol;
3. **END OF PROJECT:** ORE must be notified when a project is complete; Failure to submit an "End of Project Report" **may result in suspension of research cost fund and access to research funds may be suspended/withheld.**
4. **ADVERSE EVENTS:** Adverse events must be reported to ORE as soon as possible;
5. **AUDIT:**
 - a. More than minimal risk research may be subject to an audit as per TCPS guidelines;
 - b. A spot sample of minimal risk research may be subject to an audit as per TCPS guidelines.

FORMS: As per the above, the following forms relating to on-going research ethics compliance are available on the Research website:

- a. Renewal
- a. Amendment
- b. End of Project
- c. Adverse Event

Appendix C: Informed Consent Letter

Informed Consent

Date: May 25, 2018.

Study Name: Distance and Globally Networked Learning in “Education for International Development”.

Researchers: Don Dippo, Faculty of Education and Centre for Refugee Studies, York University

Research Assistants: and Peggy-Lynn MacIsaac.

Purpose of the Research: This research project will take place in conjunction with the York University undergraduate course EDUC 3711 Education and International Development that will be offered in June 2018. This course will enroll 49 York students in Toronto, 25 York students who live in refugee camps in Dadaab, Kenya, and 50 York students who are refugees living outside refugee camps in Thailand. Students will be taking the course in a blended, facilitated, on-line format using the Moodle learning management system and the WhatsApp phone application. This research project will explore effective means of supporting the participation of refugee students in an on-line, integrated course and will document and analyze interactions among students with a view to better understanding the potential of globally networked learning in higher education. Data will be comprised entirely of on-line submissions to the course Moodle and course specific WhatsApp interactions. We do not foresee any risks or discomfort from participation in this research. Don Dippo and three RAs,

have a dual role as instructor and a member of the research team. A fourth RA, Peggy Lynn MacIsaac is included in each of the EDUC 3711 WhatsApp groups, and is responsible for all data collection but is not involved in direct instruction. While the three other RAs are in some of the aforementioned WhatsApp groups, and provide direct instruction, Dippo is solely responsible for submitting grades in EDUC 3711 and will not be included in any WhatsApp group, nor be provided with access to any data before final grades for EDUC3711 are submitted.

Benefits of the Research: This research will contribute to overall understanding of effective means of delivering distance and globally networked learning in higher education.

Voluntary Participation and Withdrawal: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer or to stop participating will not influence your standing in the course, the nature of the ongoing relationship you may have with the researchers, or nature of your relationship with York University either now, or in the future. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: Confidentiality will be provided to the fullest extent possible by law. All information supplied during the research will be held in confidence.

Each participating student is expected to respect the confidentiality of their fellow students and RAs by

(a) using the contact phone numbers only for EDUC3711 course related activities within the guidelines of acceptable student conduct set out by York University’s Student Rights & Responsibilities document <http://www.yorku.ca/oscr/pdfs/CodeofRightsandResponsibilities.pdf> ,

(b) not disclosing their name and phone numbers to anyone,

(c) deleting all EDUC 3711 related student and RA names and phone numbers in mobile devices by July 7, 2018 11:59 PM Toronto Time, unless an individual has given the student express consent to retain his or her phone number after this date. This is to be decided between individuals,

(d) clearing all Chat history pertaining to EDUC 3711 WhatsApp groups by July 7, 2018 11:59 PM Toronto Time, and

(e) A student can at any time withdraw consent for participating in the research. If that is done before July 7, 2018 then all the data collected related to the student will be removed from the study. If that is done after July 7, 2018, and before the data has been anonymized, then all data collected related to the student will be removed from the research. If consent is withdrawn after the data has been anonymized, then the data related to the student will remain part of the study and be included in any dissemination or publication of the research in an aggregated form.

Consent to participate will be sent electronically to Peggy Lynn MacIsaac, who will keep these on a password protected computer for the duration of this research. These will be destroyed five years after the completion of this course (August 2023).

The above described use of WhatsApp makes the absolute security of the data impossible to ensure. As the data gathered is from groups communicating via mobile devices, so all members of the closed EDUC 3711 WhatsApp groups will have access. The researchers commit to no WhatsApp data being accessible to Don Dippo until after the final grades for the course are submitted. All WhatsApp data will be downloaded and saved to the password protected personal computer of Peggy Lynn MacIsaac. Upon completion of the course, the course Moodle will be archived and only the research team members will have access to this information. After a retention period of 5 years, the Moodle data will be deleted. Once the WhatsApp data has been anonymized and de-identified by Peggy Lynn MacIsaac, they will be accessible to Don Dippo and the other three RAs. At the completion of this research project, the anonymized and de-identified data will be released openly through the University of Alberta Libraries' Dataverse network, under a Public Domain license, making the data available for future secondary use forever. Electronic and paper files pertaining to this study archived by Peggy Lynn MacIsaac will be destroyed five years after this course (August 2023).

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact Professor Don Dippo either by telephone at _____ or by e-mail _____ This research has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone _____ or e-mail ore@yorku.ca).

Legal Rights and Consent:

If you consent to participating in the above described study, please send your full name and the following paragraph to Peggy Lynn MacIsaac via email _____ or text message to mobile phone _____

I consent to participate in the Distance and Globally Networked Learning in "Education and International Development" research project conducted by Professor Don Dippo. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by consenting to this study. This electronic message indicates my consent.

Appendix D: EDUC3711 Course Description and Objectives

Brief Course Description

“Education changes the world” is the slogan of the World University Service of Canada (WUSC). This course asks how education has contributed to, and sometimes been implicated in, social, political, economic, and environmental change in the context of what is commonly known as “international development”. The course will consider notions of “quality education” at the primary and secondary school levels and explore the place of technical and vocational education and training (TVET) and higher education in development.

Extended Course Description

Education constitutes an important dimension of most approaches to international development. Those that focus on human rights see education as essential to the achievement of other fundamental rights. Those that emphasize social development see education as contributing to the strengthening of social cohesion and inclusivity and the establishment of democratic institutions. Those interested in human capital development stress the relation between higher levels of education and training and overall economic growth. In *Transforming Our World: The 2030 Goals for Sustainable Development* (United Nations, 2015), Goal Four reads: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” This course introduces students to a range of theories and practices of education and international development and addresses some of the major historical and contemporary debates within the field. It asks whether and how education can contribute to an approach to sustainable

development that is committed to the achievement of social, economic and environmental justice and the creation of peaceful and inclusive societies.

Course Objectives

1. Key course objectives/UUDLES include the development of:
2. An awareness of the transformative and disruptive power of learning;
3. A commitment to diversity, inclusion, understanding, acceptance and social responsibility in dialogue with local, national, and global communities;
4. A critical understanding of the dynamics of gender, race, ethnicity, class, sexuality, culture, ability/disability, and structures of privilege in knowing and learning;
5. A knowledge of a wide range of cultural concerns and cultural differences;
6. An ability to create curricular study focused on questions of community and culture;
7. An interest in sensitizing the self to cultural and community perspectives in terms of history and present preoccupations;
8. The ability to create curricular study focused on questions of environmental sustainability;
9. The ability to articulate curricular and pedagogical intent, and ethical stance to parents, caregivers, community members and a broader public.

Appendix E: Nuremberg Code

1. The voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved, as to enable him to make an understanding and enlightened decision. This latter element requires that, before the acceptance of an affirmative decision by the experimental subject, there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonably to be expected; and the effects upon his health or person, which may possibly come from his participation in the experiment.

The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity.

2. The experiment should be such as to yield fruitful results for the good of society, unprocurable by other methods or means of study, and not random and unnecessary in nature.

3. The experiment should be so designed and based on the results of animal experimentation and a knowledge of the natural history of the disease or other problem under study, that the anticipated results will justify the performance of the experiment.

4. The experiment should be so conducted as to avoid all unnecessary physical and mental suffering and injury.

5. No experiment should be conducted, where there is an a priori reason to believe that death or disabling injury will occur; except, perhaps, in those experiments where the experimental physicians also serve as subjects.

6. The degree of risk to be taken should never exceed that determined by the humanitarian importance of the problem to be solved by the experiment.

7. Proper preparations should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death.

8. The experiment should be conducted only by scientifically qualified persons. The highest degree of skill and care should be required through all stages of the experiment of those who conduct or engage in the experiment.

9. During the course of the experiment, the human subject should be at liberty to bring the experiment to an end, if he has reached the physical or mental state, where continuation of the experiment seemed to him to be impossible.

10. During the course of the experiment, the scientist in charge must be prepared to terminate the experiment at any stage, if he has probable cause to believe, in the exercise of the good faith, superior skill and careful judgement required of him, that a continuation of the experiment is likely to result in injury, disability, or death to the experimental subject.

["Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10", Vol. 2, pp. 181-182. Washington, D.C.: U.S. Government Printing Office, 1949.]

Appendix F: Moodle Poll Questions and Responses

P-1: Are you looking forward to this course?

Yes (61%)

Maybe (31%)

No (8%)

P-2: Are you fasting this month?

Yes (31%)

No (69%)

P-3: How many languages to you speak?

One (4%)

Two (15%)

Three (55%)

Four (23%)

Five or more (4%)

P-4: Have you been immunized/vaccinated?

Yes (91%)

No (9%)

P-5: What is your father's highest level of education?

No schooling (17%)

Primary School (38%)

Secondary School (17%)

Post-secondary Education (14%)

Graduate School (13%)

P-6: What is your mother's highest level of education?

No schooling (22%)

Primary school (32%)

Secondary school (23%)

Post-secondary education (9%)

Graduate school (14%)

- P-7: What do you think is the most important aim of education?
- Social/political/ economic transformation (62%)
 - Personal growth/ enlightenment (19%)
 - Job training/ livelihoods (13%)
 - Community/cultural contribution (6%)
- P-8: What do you think ought to be the three most important priorities for international development projects?
- Economic development (10%)
 - Education for all (28%)
 - Equity and human rights (20%)
 - Food security and clean water (10%)
 - Healthcare and disease prevention (16%)
 - Peace and conflict resolution (16%)
- P-9: In 2030, the social, political, economic, and environmental state of the world will be...
- Significantly deteriorated (0%)
 - Steadily deteriorating (16%)
 - About the same (5%)
 - Steadily improving (46%)
 - Significantly improved (33%)