

UNIVERSITÉ DE SHERBROOKE

Faculté d'éducation

Developing Multiliteracies with Digital Games and Digital Literature in a College-level English
Course with First Language and Second Language Learners

Par

Nolan Bazinet

Thèse présenté à la Faculté d'éducation

en vue de l'obtention du grade de

Philosophiae Doctor (Ph.D.)

Mai 2019

© Nolan Bazinet

UNIVERSITÉ DE SHERBROOKE

Faculté d'éducation

Developing Multiliteracies with Digital Games and Digital Literature in a College-level English
Course with First Language and Second Language Learners

Par

Nolan Bazinet

a été évalué par un jury composé des personnes suivantes :

<u>Professeure Claudia Gagnon</u>	Présidente du jury
<u>Professeure Lynn Thomas</u>	Directrice de recherche
<u>Professeure Nathalie Lacelle</u>	Codirectrice de recherche
<u>Professeur Florian Meyer</u>	Membre interne du jury
<u>Professeure Jennifer Rowsell</u>	Membre externe du jury
<u>Professeur David Leahy</u>	Membre interne du jury

ABSTRACT

Digital technology has had an increasing presence in the lives of children and young adults over the last 20 years. The American, non-profit organization Common Sense Media claims that 89% of teens now own a cellphone while 70% use social media multiple times a day (Rideout & Robb, 2018). Similarly, in Canada, Statistics Canada reports that 96% of young people use the Internet on a daily basis or own their own smartphone (Statistics Canada, 2018, p.13). As a result of this, recent calls for critical education in regards to social and digital media argue for the importance of 21st century media and literacy skills (Butler, 2017; Storksdieck, 2016). These calls join a chorus of academics who have long been calling for the importance of multiliteracy development in education (Cope & Kalantzis, 2000; Gee & Hayes, 2011; Lankshear & Knobel, 2011; New London Group, 1996). In searching for texts that may facilitate multiliteracy development, digital games has emerged as an option in formal education, given the complex critical thinking, learning, and literacy practices they can afford (Beavis, O'Mara, & McNeice, 2012; Gee, 2007; Salen & Zimmerman, 2004; Squire, 2008; Steinkhueler, 2010). Similarly, recent scholarship has discussed using digital games in language and literature courses, particularly L2 environments, demonstrating how digital games can increase motivation, vocabulary attainment, and provide other linguistic benefits (Guerrero, 2011; Vahdat & Behbahani, 2013; Yang & Chen, 2012). Despite these claims, little research, has demonstrated the ways in which such texts can engender multiliteracies in both L1 and L2 environments. The study presented here sought to explore the multiliterate affordances when using digital literature and digital games for L1 and L2 learners at an English first language college in Quebec. 23 students participated in the qualitative, exploratory, design-based research study conducted in an English literature class. Results show that the implications of using digital games to engender multiliteracy development are substantive. Moreover, the study's findings indicate that students were able to apply literary concepts through playing these games, as well as interrogate terms such as empathy, multimodality, and procedural rhetoric. Therefore, digital games can be understood as convergent texts (Jenkins, 2006) in that they afford a multitude of literacies, engagement, reflexivity, and lend themselves to critical, literary analysis. However, more research is needed, particularly on the specific ways these texts might be integrated into the classroom so that teachers are provided with detailed information on how to teach with them.

Keywords: *multiliteracies; digital games; digital literature; second language acquisition;*

Résumé

Au cours des 20 dernières années, une présence accrue de la technologie numérique s'est manifestée dans la vie des enfants et des jeunes adultes. L'organisation à but non lucratif américaine *Common Sense Media* affirme que 89 % des adolescents possèdent désormais un téléphone portable, tandis que 70 % utilisent les médias sociaux plusieurs fois par jour (Rideout et Robb, 2018, p. 8). De même, au Canada, Statistique Canada rapporte que 96 % des jeunes utilisent Internet quotidiennement ou possèdent leur propre téléphone intelligent (Statistique Canada, 2018, p. 13). En conséquence, les récents appels au bénéfice d'une éducation critique en matière de médias sociaux et numériques plaident en faveur de l'importance des compétences en matière de médias et de littératies du XXI^e siècle (Butler, 2017; Storksdieck, 2016). Ces appels rejoignent un groupe de chercheurs qui revendiquent depuis longtemps l'importance du développement des multilittératies en éducation (Cope et Kalantzis, 2000; Gee et Hayes, 2011; Lankshear et Knobel, 2011; New London Group, 1996). Parmi les textes qui peuvent faciliter le développement des multilittératies, les jeux numériques représentent une option possible en éducation, compte tenu de leurs possibilités de susciter la pensée critique ainsi que d'autres pratiques multilittéraires complexes (Beavis, O'Mara et McNeice, 2012; Gee, 2007; Salen & Zimmerman, 2004; Squire, 2008; Steinkhueler, 2010). De même, des travaux récents ont porté sur l'utilisation de jeux numériques dans les cours de langue et de littérature, en particulier dans des situations d'apprentissages de L2, démontrant ainsi comment les jeux numériques peuvent augmenter la motivation, l'acquisition du vocabulaire et d'autres avantages linguistiques (Guerrero, 2011; Vahdat & Behbahani, 2013; Yang et Chen, 2007, 2012). En dépit de ces affirmations, peu de recherches ont démontré la manière dont de tels textes peuvent engendrer les multilittératies dans les environnements de L1 et L2. L'étude présentée ici cherchait à explorer les avantages des multilittératies, lors de l'utilisation de la littérature numérique et des jeux numériques dans un collège anglophone au Québec. Vingt-trois étudiants ont participé à une étude qualitative, exploratoire, basée sur une recherche orientée sur la conception (*design-based research*) en éducation, dans un cours de littérature anglaise. Les résultats montrent que les conséquences de l'utilisation des jeux numériques pour générer un développement en multilittératie sont considérables. De plus, les conclusions des recherches indiquent que les étudiants parviennent à appliquer les concepts de littératie dans leurs jeux numériques en revisitant certains termes tels que : empathie, multimodalité et rhétorique procédurale, tout en les questionnant. Par conséquent, les jeux numériques peuvent être appréhendés comme des textes convergents (Jenkins, 2006) dans la mesure où ils permettent une multitude de littératies de même qu'un engagement et une réflexivité accrus en se prêtant à une analyse littéraire critique. Cependant, des recherches supplémentaires s'avèrent nécessaires, en particulier sur les moyens précis d'intégrer ces textes dans la classe afin que les enseignants disposent d'informations détaillées sur la manière de les utiliser dans leur enseignement.

Mots-clés : multilittératies, jeux numériques, littérature numérique, acquisition d'une langue seconde;

TABLE OF CONTENTS

INTRODUCTION.....	16
CHAPTER ONE: STATEMENT OF THE PROBLEM.....	23
1. NEW LITERACY STUDIES AND MULTILITERACIES.....	23
1.1. Multiliteracies in First Language (L1) Learning Environments	27
1.2. Multiliteracies in Second Language (L2) Learning Environments.....	30
2. THE DIGITAL TURN IN FIRST LANGUAGE LEARNING ENVIRONMENTS.....	34
2.1. Digital Games in First Language Learning Environments.....	39
2.2. Digital Literature in First Language Learning Environments.....	43
3. THE DIGITAL TURN IN SECOND LANGUAGE LEARNING ENVIRONMENTS....	48
3.1. Digital Games in Second Language Learning Environments	49
3.2 Narrative in Second Language Learning Environments	53
3.3. Digital Literature in Second Language Learning Environments	56
4. ENGLISH TEACHING CONTEXT IN CÉGEP	57
5. CONCLUSION.....	60
6. RESEARCH QUESTIONS.....	61
CHAPTER TWO: CONCEPTUAL FRAMEWORK	62
1. NEW LONDON GROUP'S PEDAGOGICAL FRAMEWORK.....	63
1.1. Situated Practice.....	63
1.1.1 Digital Practices	64
1.1.2. L2 Acquisition Theory	66
1.1.2.1 Sociocultural Language Acquisition Theory.....	66
1.1.3.1. Communicative Language Teaching.....	69
1.2. Overt Instruction	69
1.2.1. Procedural Rhetoric.....	72
1.3. Critical Framing	76
1.3.1. Literary Gaming	77
1.4. Transformed Practice	79
2. CONCEPTUAL AND PEDAGOGICAL FRAMEWORK.....	81
3. DEFINITION OF MULTIPLE LITERACIES.....	83
3.1. L2 Literacy	84

3.2. Media Literacy	85
3.3. Digital Literacy	87
3.4. Technological Literacy.....	88
3.5. Information Literacy	90
3.6. Cultural Literacy	92
3.7. Critical Literacy.....	93
4. RESEARCH OBJECTIVES	98

CHAPTER THREE: METHODOLOGY101

1. RESEARCH DESIGN	101
1.1. DBR and Action Research	106
1.2. Concerns and Limitations of DBR	107
2. RESEARCH PARADIGM: QUALIATIVE AND QUANTITATIVE METHODS	109
2.1. ETHNOGRAPHY	111
3. THE RESEARCHER'S ROLE AND COURSE CONTEXT	114
3.1. Weekly Plan of Study.....	116
3.1.1. Week 1, Iteration 1: Interactive Fiction	116
3.2.1. Week 2, Iteration 2: Hypertext Fiction.....	117
3.3.1. Week 3, Iteration 3: Hypermedia Fiction and Digital Games.....	117
3.4.1. Week 4, Iteration 4: Study Conclusion	118
4. POPULATION AND SAMPLE.....	118
5. DATA COLLECTION TECHNIQUES.....	119
5.1. Think-Aloud Protocols	120
5.2. Screencasts	122
5.3. Classroom Artefacts	123
5.4. Focus Groups.....	125
5.5. Field Notes	126
5.6. Surveys	127
6. ANALYSIS OF DATA	127
7. TRIANGULATION.....	129
8. ETHICS.....	130
9. CONCLUSION	132

CHAPTER FOUR: DATA ANALYSIS	133
1. SUMMARY OF DATA COLLECTED	133
2. PRE-STUDY SURVEY	134
2.1. Linguistic self-identification	135
2.2. Frequency of Digital Game Play	136
2.3. Familiarity with Digital Literature	137
2.4. Level of interest to play/read.....	138
2.5. Analysis of Pre-Study Survey	139
3. PRESENTATION OF WEEKLY FINDINGS	140
3.1: First Iteration: Week 1 - Interactive Fiction.....	141
3.1.1. <i>Day 1: Observation/Field Notes</i>	141
3.2.1. <i>Day 2: Observation/Field Notes</i>	146
3.3.1 <i>Week 1 – Summary of Literacies, Concepts, Themes That Emerged During the Week</i>	151
3.4.1. <i>Situated Practice</i>	152
3.4.1.1 <i>Identity and Perceptions/Impressions</i>	153
3.4.2.1. <i>Media Literacy</i>	154
3.4.3.1 <i>Sociocultural Literacy</i>	155
3.4.4.1 <i>Technological Literacy</i>	156
3.4.5.1 <i>L2 Literacy</i>	157
3.4.6.1 <i>Other themes/categories that emerged: Goal-Directed Behaviour</i>	158
3.5.1. <i>Overt Instruction</i>	159
3.5.1.1 <i>Information Literacy</i>	160
3.5.2.1 <i>Sociocultural Meaning Making</i>	162
3.6.1 <i>Critical Framing</i>	163
3.6.1.1 <i>Visual/Multimodal Literacy</i>	164
3.7.1 <i>Transformed Practice</i>	166
3.7.1.1. <i>Design Suggestions</i>	167
3.8.1 <i>Data Triangulation</i>	168
3.9.1 <i>Modifications to Future Iteration</i>	169
3.10.1 <i>First Iteration: Week 1 Conclusion</i>	170

4.1. Second Iteration: Week 2 - Hypertext Fiction	171
4.1.1. Day 1: Observation/Field Notes	172
4.2.1 Day 2: Observation/Field Notes	175
4.3.1 Week 2– Summary of Literacies, Concepts, Themes That Emerged During the Week	176
4.4.1. Situated Practice	177
4.4.1.1. L2 Learning and Motivation	178
4.4.2.1. Implicit L2 Learning, Situated Learning and Meaning.....	179
4.4.3.1 Interaction and Embodiment	180
4.5.1 Overt Instruction	182
4.6.1 Critical Framing	183
4.6.1.1 (Socio)Cultural Literacy	183
4.6.2.1 Multimodal Literacy.....	185
4.6.3.1 Goal-Directed Behaviour.....	185
4.6.4.1 Critical Literacy	187
4.7.1 Transformed Practice.....	188
4.8.1 Data Triangulation.....	190
4.9.1 Modifications to Future Iteration.....	191
4.10.1. Second Iteration: Week 2 Conclusion	193
5.1 Third Iteration: Week 3 - Hypermedia Fiction/Digital Game Theory Introduction	194
5.2.1. Day 1: Observation/Field Notes	194
5.3.1. Day 2: Observation/Field Notes	195
5.4.1. Week 3– Literacies, Concepts, Themes That Emerged During the Week	197
5.5.1 Situated Practice	197
5.6.1 Overt Instruction	198
5.7.1 Critical Framing	200
5.7.1.1 Media literacy	200
5.7.2.1 Critical literacy	202
5.7.3.1 Other themes/categories that emerged: Moral Choice and Empathy.....	202
5.7.4.1 Goal-Directed Behaviour.....	205
5.7.5.1 L2 Literacy	205

5.8.1 Transformed Practice.....	206
5.8.2.1. Critical literacy	207
5.9.1. Data Triangulation.....	209
5.10.1. Modifications to Future Iteration.....	210
5.11.1. Third Iteration: Week 3 Conclusion.....	211
6.1. Fourth Iteration: Week 4 - Digital Game Conclusion/Preparation for Final Evaluation	212
6.1.1. Day 1: Observation/Field Notes	212
6.2.1. Week 4 - Summary of Literacies, Concepts, Themes That Emerged During the Week	213
6.3.1. Situated Practice	214
6.3.1.1. Interactive fiction in relation to their practices	214
6.3.2.1. Hypertext fiction in relation to their practices.....	215
6.3.3.1. Hypermedia fiction in relation to digital practices.....	216
6.3.4.1. Using different technologies in class / relation to their practices	217
6.3.5.1. Digital games in relation to life	219
6.4.1. Overt Instruction	220
6.5.1. Critical Framing	221
6.5.1.1. Empathy, embodying characters, and the complexity of moral decisions/ethics	221
6.5.2.1 Multimodality as factor for embodiment/empathy	223
6.5.3.1 Goal-Directed Behaviour.....	225
6.5.4.1. Information Literacy	226
6.5.5.1. L2 Literacy	226
6.6.1 Transformed Practice.....	227
6.7.1 Data Triangulation.....	227
6.8.1 Modifications to Future Iteration.....	228
6.9.1. Week 4 Conclusion	229
4.1. POST-STUDY SURVEY	230
4.1.1. Question 1: The most difficult aspect about the digital literature we played was... .	230

4.2.1. Question 2: The most interesting aspect about the digital literature we played was...	230
4.3.1. Question 3: The most interesting aspect about the digital game I chose was...	231
4.4.1. The most difficult aspect about the digital game I played was...	231
4.5.1. By learning about digital literature and digital games, I realized....	232
4.6.1. ANALYSIS OF POST-STUDY SURVEY.....	232
5. CONCLUSION.....	233
CHAPTER FIVE: FINDINGS AND DISCUSSION.....	236
1. GENERAL OBJECTIVE ONE.....	236
1.1. Implementation and modification.....	237
2.1. Situated Practice.....	239
2.2. Conclusion to Situated Practice.....	250
3.1. Overt Instruction.....	252
3.2. Conclusion to Overt Instruction.....	260
4.1. Critical Framing.....	261
4.2. Conclusion of Critical Framing.....	266
5.1. Transformed Practice.....	267
5.2. Conclusion to Transformed Practice.....	269
2. GENERAL OBJECTIVE TWO.....	271
2.1. Sociocultural context of English language learning.....	271
1. SUMMARY OF FINDINGS AND DISCUSSION.....	277
CONCLUSION.....	280
1. LIMITATIONS.....	280
1.1. Sociocultural Underpinnings.....	280
1.2. Quantitative Limitations.....	281
1.3. Qualitative Limitations.....	283
1.4. Struggling with the Conventions of DBR.....	286
1.5. The Binaries of Identity.....	288
1.6. The Binaries of Inside versus Outside School Practice.....	290
1.7. The Binaries of Digital Games and the Classroom Context.....	291
2. RECOMMENDATIONS AND FURTHER RESEARCH.....	292

2.1. Recommendations	292
2.2. Teacher Training Programs	293
2.3. Digital Games in Contemporary Teaching.....	294
2.4. Digital Games and Second Language Teaching	294
2.5. Literacy and the Post-human.....	295
REFERENCES.....	298
APPENDIX A	336
APPENDIX B.....	338
APPENDIX C	344
APPENDIX D	347
APPENDIX E.....	351
APPENDIX F.....	352
APPENDIX G	354
APPENDIX H	355

LIST OF TABLES

Table 1. How do you self-identify (in terms of language)?.....	p.108
Table 2. How often do you play digital games?.....	p.109
Table 3. Before this course, had you ever heard of digital literature?.....	p.110
Table 4. Please indicate your level of interest to play/read the following.....	p.111

LIST OF FIGURES

Figure 1. Conceptual and Pedagogical Framework.....	p.66
Figure 2. Week 1 – Summary of Literacies, Concepts, Themes That Emerged During the Week.....	p.121
Figure 3. Week 1 – Pedagogical Considerations.....	p.135
Figure 4. Week 2 – Summary of Literacies, Concepts, Themes That Emerged During the Week.....	p.141
Figure 5. Week 2 – Pedagogical Considerations.....	p.153
Figure 6. Week 3 – Summary of Literacies, Concepts, Themes That Emerged During the Week.....	p.156
Figure 7. Week 3 – Pedagogical Considerations.....	p.166
Figure 8. Week 4 – Summary of Literacies, Concepts, Themes That Emerged During the Week.....	p.168
Figure 9. Week 4 – Pedagogical Considerations.....	p.179
Figure 10. Comprehensive Pedagogical Considerations of All Four Weeks.....	p.184
Figure 11. Summary of Situated Practice.....	p.197
Figure 12. Summary of Overt Instruction.....	p.204
Figure 13. Summary of Critical Framing.....	p.209
Figure 14. Summary of Transformed Practice.....	p.212
Figure 15. Summary of Findings and Discussion.....	p.218

LIST OF ACRONYMS AND ABBREVIATIONS

L1	First language
L2	Second language
CALL	Computer assisted language learning
CLT	Communicative language teaching
COTS	Computer off the shelf games
CÉGEP	Collège d'enseignement général et professionnel
DBR	Design based research
DGBL	Digital game based learning
DGBLL	Digital game based language learning
EFL	English foreign language
ESL	English second language
ICT	Information and communication technology
NLG	New London Group
SLA	Second language acquisition
LMM	Littératie médiatique multimodale
MELS	Ministère d'éducation et de sports
MEES	Ministère d'éducation et d'études supérieures
MMORPG	Massively multiplayer online role playing game
NAMLE	National associating of media literacy education
NLS	New literacy studies
RPG	Role playing games
ZPD	Zone of proximal development

ACKNOWLEDGEMENTS

I would first like to thank my advisor Professor Lynn Thomas for her continuous support during my Ph.D. studies. Her generosity, patience, and helpful feedback kept me motivated throughout this process. Without her help, I do not believe it would have been possible to complete this project.

I would also like to thank my co-advisor, Professor Nathalie Lacelle. Her encouragement and breadth of knowledge in multiliteracies was crucial for me to complete this dissertation. She continues to point me towards interesting new avenues of research and theory related to multiliteracies as well as a number of related fields. It has been a true pleasure working with her.

I thank my peers David Neville, Paul Darvasi, and Matthew Farber for exchanges and discussion related to this project and its various topics. I would also like to thank my friends Alan Shapiro, Nick Walker, and Pete Webb for stimulating discussions that helped me with my personal, professional, and academic growth. Thank you to Marc-Antoine Turcotte for help in assisting me with the figure drawings, and for discussions about our shared interest of teaching with games.

Last but not least, I would like to thank my family: my mother, my father, my sister, and especially my partner, Josiane Pellerin, for her support during this project. And thanks to Louis for bringing my attention back, every now and then, to the birds.

INTRODUCTION

Since the end of the 20th century, it has been a challenge for teachers and educators in English literacy classrooms to continually adapt with the rapid changes of media and communication used to deliver the language they are teaching. Notwithstanding the commitment put forward by formal education's goals to assure all are able to read and write in the language or languages prescribed within its country's borders, the challenge to keep up with current modes of communication has become increasingly difficult. Unsurprisingly, this has also been the case for the teaching of English as a second language. Over the last 20 years, scholars in both L1 and L2¹ teaching and learning have noted the importance of expanding notions of the types of texts instructors should introduce into the classroom, favouring more contemporary forms of media and communication that relate to the ways of reading, writing, speaking - and thus *being* - outside of the classroom. Similarly (and perhaps because of the rapid change brought on by technology), the fundamental differences between what distinguishes an L1 classroom from an L2 classroom are becoming blurred. For instance, when we look at the contemporary L1 classroom, we quickly realize that many learners speak one language with varying degrees of fluency, which problematizes the ways teachers conceive of – and teach – in both first and second language classrooms. Furthermore, the definition of an L1 or L2 class is also blurred today, as many so-called L1 classes are in fact full of L2 learners. Thus, in both L1 and L2 classrooms academics have had to reconsider not only the fundamental ways these classes are constituted, but also how one becomes literate with contemporary texts in a given language.

¹ L2 will be used throughout this study to signify English as a second (or other) language of instruction, unless otherwise noted. Similarly, the acronym ESL (English as a second language), will be used, though minimally, and only in reference to studies that employ the term given its problematic term via the implication that English is

Indeed, English language arts teaching² has mostly relied on an understanding and analysis of a certain type of ‘text’³. Often, the text used has been in the form of linguistic material, predominantly in its linguistic, printed form. As the discipline has been taught in later grades (from high school to college and/or university), these texts, particularly in the case of English first language teaching, have been of the ‘literary’ sort, as this had been the most effective, material object of analysis and has thus justified its existence as an academic discipline in higher education⁴. However, it is clear, particularly in the 21st century, that the word ‘text’ no longer connotes the same thing as it may have two centuries, not to mention, 20 years ago. The word text today is much more ambiguous than it perhaps once was, best exemplified by the word’s contemporary connotation of ‘a text’, as in a text message. And indeed, this is an especially germane example, as it points to how the form used to present the linguistic material has affected the language and our socio-culturally dependent ways of communicating, underscoring what Marshall McLuhan famously claimed, “the medium is the message” (McLuhan, 1964, p. 7).

Thus, moving from books, to newspapers, to text messages, the 20th and subsequent early 21st century saw a significant evolution in how people communicated. As society changed in how it communicated in the mid to late 20th century, it was thinkers such as Robert Scholes (1985), who presented an early argument for the necessity of English teachers and scholars to shift their

² Clearly, English first language teaching, understood as literacy and/or literature teaching, is different than English as a second (or other) language teaching and learning. However, for the context of this study, which will be justified below, these two disciplines will be slightly conflated.

³ Here I am using ‘text’ in its broadest form: the material outcome of a form of communication whether it is via a linguistic, visual, audio, or gestural mode.

⁴ The implication here is that ‘literary works’ were those texts that were considered to be in the realm of higher culture and rarefied, unlike other written works, and that this justified the discipline for academic study.

concern from a curriculum focused on literary canon, to one that focuses on ‘textual studies’⁵. For Scholes, textual studies calls for a reconsideration of the necessity to only analyze the page and/or book and rather, calls attention to the institutional practices and social structures, which can be studied as codes and texts whether they be visual, verbal, or polemical (p. 16-17). Scholes’ claim reflects a shift not only in literature teaching, but one in standard literacy development. In other words, Scholes’ argument, along with other scholars as will be discussed below, was representative of a contemporary change in understanding how readers engage in a variety of different texts, which problematized the foundations of how literacy was conceptualised. This reconceptualization can be defined as a shift from the focus of simply the reader and text, to the interrelation between the reader, the text, and the world (Cook-Gumperz, 1986; Eco, 1984; 8y, 1977).

As in first language teaching situations, second language teaching also encountered similar calls to properly address the need for students, even in a second language, to go beyond a functional understanding of the text (Kress, 2000). Granted, these calls were stronger in more advanced levels of second language teaching (for instance, a beginner level course would not necessarily demand that students develop a broader sociocultural understanding of the way the language of instruction functions). Nevertheless, a comparable shift occurred in second language teaching, as will be discussed below, to expand upon the meaning making and meaning creation that traditionally occurred in these environments.

⁵ There were of course, as will be discussed below, contemporary theorists in New Literacy Studies who argued for an expansion of what it means to be literate or read and write in contemporary society. However, Scholes is somewhat unique in his early argument for a broader analysis of textual studies in the English literature classroom.

The manner in which one interprets texts through their relation with the world, and more specifically, their sociocultural associations, is a key element implicated in schools of thought within New Literacy Studies including teachers and theorists concerned with multiliteracy development. New Literacy Studies and/or multiliteracy development has been principally concerned with the variety of literacies – be they media, cultural, or digital literacy – people need to acquire, in order to competently communicate in today’s society. As will be discussed in the first chapter, these developments in how people ‘read’⁶ and make meaning via language – and here the focus is principally concerned with the English language – grew out of the mid-to-late 20th century, paralleling the expansion of the various modes of communication and media within an increasingly globalized economy.

Whether learning English as a first or second language, there have been a variety of modes of communication to justify the importance of multiliteracy teaching. Indeed, media ranging from advertisements, television shows, graphic novels, and podcasts have been the subject of multiliterate analysis in English first language and second language classrooms⁷. However, it has been the recent development of digital games, and similarly, digital literature, that has provided some interesting multiliterate possibilities. As will be presented in this dissertation, digital games and digital literature can be considered ‘convergence texts’ that offer the ability for students to interactively engage with language, themes, and cultural values, but more importantly, allow them to engender various literacies resembling the competencies

⁶ The word in single quotes here is to signify a slight difference in the word read which is apart from its usual connotation of interpreting linguistic words, to one that is broader yet closer to the origin of the word which is *raden*: to guess or advise.

⁷ However, as will be discussed below in chapter one, there was a concern (Kress, 2000) that second language teaching was lagging behind in integrating multimodal and multiliterate teaching.

required by ministry curricula and furthermore, align with the literacies many are, or will be, engaging in outside of school communities.

To begin outlining multiliteracy development with digital games and digital literature, chapter one will begin by exploring particular issues in both L1 and L2 multiliteracy development, in so far as they relate to the stated project, including specific examples of how L1 and L2 multiliteracy development have been affected by digital technology. Furthermore, the emergence of digital literature and digital games in L1 and L2 contexts will also be discussed in chapter one, as well as a brief discussion of English teaching at the college level in Quebec to situate the study's context via current literature. The chapter will then conclude with the research questions that were considered for this project. All of this will attempt to situate the project towards filling the lack, at both the practical level (i.e. in the classroom) and on the theoretical level, of multiliterate development using digital games and digital literature in college-level English courses.

Chapter two will present the conceptual framework that was developed to best analyse, and teach, digital games and digital literature with the objective of engendering multiliteracies using these texts. Such a framework, as will be argued below, has largely been inspired by the New London Group's pedagogy⁸ of multiliteracies, given its simplicity and ease of use with digital, interactive texts. Evidently, the term multiliteracies implies multiple literacies being enacted. However, and as will be discussed below, rarely are specific literacies mentioned when

⁸ The term pedagogy will be used throughout this dissertation; therefore it would be worthwhile to define its usage in how it will be used throughout this document. Pedagogy is defined as: "The method and practice of teaching, especially as an academic subject or theoretical concept" (Pedagogy, n.d.). Thus, in keeping with this definition, pedagogy will be used to highlight the method and practice of teaching, especially in how particular material, concepts, or ideas are transmitted to students through teaching practices.

this term is employed in research studies using digital games and digital literature, not to mention what context they have been articulated in. Thus, an explanation of which particular literacies, as well as their theoretical underpinning will be discussed, including relevant game studies concepts that were anticipated to be engendered, or discussed, throughout the study. Finally, chapter two will conclude with the research objectives considered for the study.

In the third chapter, an account of the methodological considerations for this study will be presented. The chapter will begin with a discussion of the research design used for the present study, which is a design based research design. Next, the research methods will be discussed followed by an explanation of the researcher's role and the course context given the unique nature of the context of the study being an Anglophone college in majority Francophone Quebec, where a large number of the student population are Francophones. Subsequent to this, the population and sample will be discussed followed by the data collection techniques used in the study, as well as the analysis methods, and finally, the ethical considerations of the study.

With the completion of all methodological considerations, chapter four will demonstrate the pertinent data that was collected during the study. An analysis of the data will be done using the New London Group's pedagogical framework, as discussed in chapter two, and will highlight the particular literacies, concepts, and game studies terms relevant to the study and its design. Also detailed in this study, where appropriate, are the results of the data in relation to previous studies, scholarship, and academic writing. The chapter will then conclude with a synthesis of the data that was presented.

The fifth chapter will explicitly relate the data to the objectives sought in the study. An explanation of how the data responds to the objectives, including pertinent research published on such data, will be presented. And finally, the study will conclude by presenting its limitations, as well as the interrelation between research, teacher education and practice, as well as recommendations for future research.

CHAPTER ONE: STATEMENT OF THE PROBLEM

1. NEW LITERACY STUDIES AND MULTILITERACIES

Over the last century, the concept of literacy, particularly in formal education, has changed dramatically. Originally defined as the ability to read and write, literacy was introduced into the educational system, mostly in North America, but also in Europe, by the end of the 18th century (Olson, 1977). More precisely, in the case of Canada, literacy development was implemented along with state-wide mandatory education in the latter half of the 19th century. As Willinsky (1992) points out, the push for literacy in Canada had a largely ideologically-laden agenda. English Canadian educators leaned heavily on a British colonial curriculum that remained in place into the 1950s (Graham 1989), particularly in places like Ontario where Protestant texts were largely used to develop reading and writing skills (Willinsky, 1992, p.272). In Quebec, all education, up until the Quiet Revolution of the early 1960s, remained in the hands of the Jesuits inspired by the Roman Catholic Church (Willinsky, 1992, p.273). Thus, up until the mid-20th century, the country's literacy teaching relied heavily on colonial, or religious, interests - and in most cases, both.

The irony here is that, as literacy development was first instilled into education, it was promoted as a contributor to individual power and status (Heath & Street, 2008, p. 18); yet, evidently, it was also promulgated by those with particular positions of power and status and thus reflected their ideologies⁹. However, an understanding of the complex, sociopolitical and cultural dynamics behind literacy learning did not gain ground until the 1980s. Early pioneers in this development were scholars such as Heath (1983), Scollon and Scollon (1981), and Street (1984),

⁹ Of course, any particular ideology is always the impetus behind formulations of education. This is particularly evident, as will be discussed below, in Quebec in regards to the choice (or lack thereof) of language of instruction.

who began interrogating the conventional, or in the case of Street, ‘autonomous model’¹⁰ of literacy as independent from its sociocultural surroundings. These scholars, rather, underlined the extensive ways literacy is a social, cultural, and ideologically dependent process. This reconceptualization also represents a shift from what Gee later (2015) identified as the traditional approach of literacy, which had viewed it as an internal, cognitive phenomenon, to what New Literacy Studies (hereafter NLS) scholars argue as an external one, constituted by social and/or cultural practices, which were heretofore ignored in literacy scholarship¹¹ (Gee, 2015, p. 35).

As literacy scholars began looking towards the social and cultural implications of literacy, it became difficult to ignore the increased role of communication technology. Throughout the 1990s, personal computers became more prominent in households, rather than mostly present in offices, and the Internet began to expand by leaps and bounds during the latter half of the decade. Noticing this, a number of NLS scholars met in New London, New Hampshire to compile what was soon to become an influential text within the field of literacy education. Thus, it was in 1996 that the self-designated New London Group published “A Pedagogy of Multiliteracies: Designing Social Futures”. This article built upon contemporary NLS scholarship which had already argued for a more sociocultural understanding of literacy, and included the belief that an emerging cultural, institutional, and global order was being confronted by a variety of forms of, mostly, digital communication and media which challenged “formalized, monolingual, monocultural, and rule-governed forms of language” (p. 60). This new theoretical framework was inspired by linguistic theories such as Fairclough’s (1995) order of discourse (i.e. the various relationships

¹⁰ The autonomous model refers to the notion that literacy occurs independently from the sociocultural context in which it is used.

¹¹ It is also worthwhile to note the contemporary ‘post-humanist’ turn in literacy education scholarship, one that, as Kuby & Rowsell (2017) have claimed “is thinking about ways humans, nonhumans and more-than-humans are already always entangled in producing truths, realities, knowledges and relationships, and [...] literacies” (p.285).

within discursive practices) and the numerous conventions that can be articulated through semiotic activity (including, but not exclusively, the use of language) present in social situations (New London Group, 1996, p. 74). This perspective was also informed by Halliday's (1978) important work in systemic functional linguistics, which focused on the ideational, interpersonal, and textual macro functions of language. Such a macro perspective of the structure, and underlying facets of language use, was examined through a critical literacy lens (Freire, 1968; Janks, 1993; Lankshear, 1993) and thus demanded a more complex, integrative conceptualization of multiple literacies¹² (thus, the term multiliteracies), seeking to include a variety of literacies (e.g. critical literacy, media literacy, information literacy) along with their concomitant meaning making practices.

Given this, language as the principal mode of meaning needed to be reassessed. Once traditional conventions of literacy development were put aside, an equal or greater emphasis on multimodality, defined as the dynamic relationship between various modes of meaning, became apparent, particularly in the media saturated age of late 20th century society. Thus, the New London Group (1996) argued that a metalanguage needed to be developed to address "the textual and the visual, as well as the multimodal relations between different meaning-making processes that are now so critical in media texts and the texts of electronic multimedia" (p. 77). Such a metalanguage, they argued, would assist learners in not only the consumption of various multimodal texts, but also prepare them to be active producers of such texts.

Multimodality thus became a cornerstone of multiliteracy development, most frequently

¹² Gee (2015) has referred to this as also being represented in the shift in term from New Literacy Studies, to New Literacies Studies.

discussed by NLS collaborator Gunther Kress (2002, 2003, 2010) whose work, along with theorists such as Van Leeuwen (2002) and Cope and Kalantzis (2000), discuss the term's importance in relation to contemporary meaning making. For Kress (2010), multimodality refers to the mixture of modes and the meaning accorded to them when combined in a message (p. 3). Moreover, discussions of multimodality are inextricably tied to the sociocultural aspects of various modes and the ways in which they afford meaning for a particular culture or society at a given time. Thus, Kress (2010) contends that multimodality is one aspect that leads to social semiotics which provides a framework to apply theories of meaning and how such meaning is decoded regardless of the social situation or cultural site (p. 3). Moreover, discussions of such invariably reveal the power dynamics behind them, for as Kress states: "Whereas social is marked by power (difference) the cultural is marked by values, evaluation – itself the effect of social power" (p. 13). Therefore, multimodality invariably opens up questions of critical literacy, which is ever more important in light of the profusion of multimodal messages over the late 20th and early 21st century, specifically media images, via print or digital (Lacelle, Lebrun, Boutin, Richard & Martel, 2015; Rowsell & Pahl, 2015). Thus, a pedagogical imperative emerges in being able to decode not only the message, but also the underlying power structures behind them.

An emphasis on the ways in which power structures are implicitly produced and reflected through texts is a point that scholars such as Scholes' (1985) had also been cognizant of. Indeed, he expressed similar concerns with the ways in which texts are places where underlying power dynamics can become apparent and palpable (Scholes, 1985, xi). Moreover, publishing a decade before the NLG's manifesto, Scholes was prescient in his view that multimodality – though he never explicitly used the term – needed to be integrated into the literature classroom: "All kinds of texts, visual as well as verbal, polemical as well as seductive, must be taken as the occasions

for further textuality” (p.16). Since Scholes’ claims, there has been a gradual interest over the last two decades in multiliteracies teaching and learning which has highlighted the role of technology in contemporary meaning making practices.

1.1. Multiliteracies in First Language (L1) Learning Environments

Even though multiliteracy development through non-traditional texts has been a slowly developing field in the late 20th and early 21st century, there has been some research done in Canada that have produced some compelling studies within English first language (L1) environments. For instance, Gouthro and Halloway (2013) report on a number of teachers whose use of fiction writing for diverse learners provided effective examples of how multimodal texts were able to engender learning connected to critical thinking as well as multiliteracies. Others, such as Rowsell, McLean, and Hamilton (2012) present a study of grade nine students’ articulation of multiliteracies, developed through various visual literacy practices, such as the ones tattoos afford. Such pedagogy, the authors claim, led to discussions of the historical evolution of body art with its connection to cultural encounters, questions of identity, even the medical ramifications of tattooing (p. 446). Indeed, multiliteracies can challenge dominant, normative schooling practices, such as Marshall and Toohey’s (2011) study of Punjabi-Sikh children who created dual language picture books in an L1, monolingual school. These books presented historical events in India and the religious conflicts therein, from the point of view of the family elders. Similarly, Taylor, Bernhard, Garg and Cummins (2008) demonstrate that challenging the monolingual, and by extension, monocultural practices of a school’s reliance on traditional print-based literacy, can allow students to affirm literacies associated with their own complex transnational and transgenerational communities of practice. Their study invited students to produce multimodal identity texts, which documented evolving family literacy

practices and the concomitant change of relationships and values that were made possible by the project's 'extra-curricular' notions of literacy (p. 281). More importantly, allowing students to enact such literacies subsequently allowed for their inclusion within the school curriculum (p. 269). Likewise, Giampapa's (2010) study of students' identity texts created learning opportunities for students to access the English mainstream curriculum and, moreover, allowed for the co-construction of knowledge and a variety of discursive encounters between differing interest groups such as teacher-student, student-student, and student-parent-teachers (p. 425). What these studies have in common is their challenge to the standard forms of education, particularly highlighting the multicultural and multi-ethnic realities of contemporary classrooms.

Incorporating non-traditional texts such as those in the popular culture genre has also proved to be fertile ground for multiliteracy development. Scholars like Stevens (2001) in the United States engaged teachers at a middle school to integrate a number of television shows and films into their classrooms. Her fellow science colleague elected to use parts of films like *Jumanji* and *Raiders of the Lost Ark* to interrogate the fictional representation of physics in films. Despite the fact that students were immensely engaged in the exercises and were able to discuss the scientific elements of the special effects they viewed, the teacher did not have the opportunity to interrogate the power structures and agenda behind the filmmakers making these films that is necessary for critical literacy (p. 551). Stevens' also reports on a colleague who featured a unit on popular culture social science studies. After analyzing a number of popular culture texts ranging from music (The Beatles), television shows (*The Partridge Family*) and films (*ET The Extra Terrestrial*) students were put into groups and allowed to choose a popular culture text to analyze. One group in the course used the popular television show *South Park*, that apparently fostered a dynamic discussion on political correctness and its backlash. Overall, the teacher of the

course was impressed by the level of critical thought engendered by these group members' presentations. Stevens concludes her study by noting that the students in all of the classroom scenarios above proved that "given the opportunity to concretely relate school-based concepts to their popular culture affinities, they can move well beyond any view of students as passive consumers" (p.554).

Certainly, analysis of television programming has strong potential links to multiliteracy development, particularly in the English literature classroom. For instance, Mackey (2003) argues that television shows like *Felicity*¹³ can engage in a number of literacies, both present in the text and exterior to it. For instance, Mackey suggests that a show like *Felicity* is ripe for analysis that "explores the literate practices of the characters within the world of the story; the narrative devices used to frame the storytelling of the series; and the external but connected texts arising from three sources: those created by the publicity industry associated with the show; those created by the creators of the series; those created by the fans" (p. 391). Mackey then proceeds to provide a detailed analysis of each, providing useful examples to be used in the classroom. She then concludes by effectively claiming that teachers will be more equipped to extends students' literacy needs "if we first acknowledge and respect the vast textual world that many of them inhabit in their own time and for fun" (p. 408).

Similarly, a group of researchers here in Quebec known as le Groupe de recherche en Litt  rat  e M  diatique Multimodale (LMM) have recently begun investigating the ways in which the development of multimodal literacies can be integrated into the Quebec education system

¹³ *Felicity* is a television programme that aired from 1998 to 2002. The show revolves around a young college student as she navigates life at a New York university with her myriad friendships and romantic relationships.

(Lebrun, Lacelle & Boutin, 2012, 2017). Like the New London Group before them, members of the LMM group believe that the development of media and multimodal literacies responds to a pressing need for students to be not only literate in the traditional sense, but that students need to become conscience of multimodal texts' production and hence, mastery, which may allow them not only to interpret and analyse the content critically, but also manipulate the codes as needed, allowing the students to become producers, as opposed to passive consumers (2012, p. 224). Thus, the LMM group have been establishing a framework that builds on a conception of the purpose of literacy from epistemological foundations common to various disciplines (multimodality, social semiotics, cybernetics, and connected learning) and knowledge of current social, cultural and educational issues. The group's research has focused on a wide range of multimodal texts ranging from graphic novels (Lacelle, 2012) to films (Lacelle, 2011), integrating, as the theorists above have done, traditionally out-of-school literacy practices into the primary and secondary school curriculum. As will be discussed below, much of their recent work interrogates the role of digital texts and their implications for multimodal literacy in formal learning environments. However, before discussing the implications of the digital turn in L1 learning environments, the development of multiliteracies in L2 learning environments needs to be elucidated.

1.2. Multiliteracies in Second Language (L2) Learning Environments

Using non-traditional texts to emphasize multiliterate learning within formal education environments over the last 20 years has not only been emerging within L1 education, but also within second language (L2) learning environments. Indeed, theorists such as Kress (2000) have cautioned against the lack of L2 instructors' concern regarding the importance of multimodality

within their pedagogy. Kress asserts that many applied linguists, particularly teachers of English as a second or other language, would claim that their main concern was “language, after all, and these other things were someone else's to look after” (p. 337). Despite the resistance, L2 pedagogy has in some way been concerned with multimodality, through the approach of sight word recognition (Beechler & Williams, 2012; Bliss, Skinner & Adams, 2006). However, though sight word recognition has long been used in both L1 and L2 literacy development (Bridge, Winograd & Haley, 1983), it does not formally focus on the critical analysis of how particular modes, when combined together, assist in engendering multiliteracy development, specifically media literacy (critical reading of media messages) and critical literacy (a reflexivity on the ways in which messages are created and how certain messages may be constitutive of power dynamics).

Since Kress' criticism 15 years ago, some theorists and teachers have indeed begun to look at the ways non-traditional forms of multimodality can be implemented into L2 learning situations. For example Chun (2009) used multimodality in an ESL classroom to demonstrate how graphic novels such as Art Spiegelman's *Maus* can engender a 'critical literacy tool kit' fostered through the narratives' use of personal stories to connect the personal with power relations in society. Chun poignantly uses the example of how his students identified with the smuggling scene in *Maus*, many relating it to their own experiences of illegally crossing the border (p. 151). Using other non-traditional forms of texts, Huang (2009) performed a study by using films as a popular type of mass media, inviting students to produce counter-narratives that could address the dominant discourses and their underlying ideologies in regards to race, class, and gender, which are omnipresent in contemporary forms of mass media (p. 24). Huang highlights the fact that the students were able to identify power relations between characters and

the ways in which specific characters were being marginalized (p. 34). Others, like Early and Marshall (2008), performed a study of secondary students' experience with multimodality and how it enabled students to acquire a better understanding of literary texts. The authors claim that the study was successful in assisting students despite the presence of the difficult aspects of figurative language and cultural norms, which frequently cause difficulties for L2 learners, underscoring the effective complement multimodality instruction brings about in L2 courses, particularly when introduced to literary texts.

Some theorists believe cultural norms and power relations should always be present in L2 learning and teaching situations, particularly ESL and English foreign language (EFL) teaching¹⁴. L2 scholars, particularly when discussing EFL teaching, have been sensitive to such issues such as the 'linguistic imperialism' (Phillipson, 1992) of the English language and the effect of ESL teaching on linguistic and cultural minorities (Kubota & Lin, 2009; Pennycook, 1999). Furthermore, L2 scholars have begun to discuss how language within certain texts can represent and affect social power, inequality, agency and identity (Luke & Dooley, 2011), providing new and innovative avenues for multiliteracy L2 scholarship. More broadly, some English as a foreign language scholars have been quick to consider multiliteracy pedagogy within the classroom, seeing it as an opportunity to address curriculum demands that call for a shift from strictly linguistic centered learning, to a more language, literature, and culture approach (Willis Allen & Paesani, 2010). All of the above scholarship in ESL and EFL environments reflects the similar shift from cognitive and psycholinguistic theories of literacy learning to sociological, sociocultural, and critical linguistic aspects as discussed by NLS scholars. These concerns have

¹⁴ English foreign language teaching refers to teaching English in a country where English is not the native language, whereas English second language teaching is used where English is the native language.

implications not only for the learning of language itself, but as the New London Group has argued, for the adoption of a critical stance in regards to the profusion of media and technological communication that carries such language.

Appeals to educate L2 students on the ways in which media affect and distribute information and language have indeed increased over the last 15 years. Authors, such as Quinlisk (2003) and Arikan (2002), have noted how contemporary media convey large amounts of information, particularly linguistic, that demonstrate various grammatical and pragmatic structures, not to mention discourse patterns. All of these elements could - and according to the authors - should be discussed in the L2 classroom given that certain media present subtle messages regarding various social interactions, habits, rules of participation relative to a society or culture and thus what a given society values or not (Quinlisk, 2003, p.35). Quinlisk effectively points out that language instructors often use media images, film and TV excerpts to represent the target language being taught, particularly if the learning contexts are geographically far removed from the target language. The use of such texts provides a resource for examining the various linguistic aspects (socio-pragmatic, grammatical, lexical) of the language. However, Quinlisk also demonstrates the ways in which such images also tacitly include ideologies and representations of societies, languages, and cultures that should be interrogated even in L2 environments. This is especially important given that these types of media function as a form of cultivation, in that they consistently and implicitly cultivate beliefs or perspectives about the real world (p. 36). Given the concerns by the above authors that multimodal texts are used uncritically in L2 environments, the case for multiliterate teaching in these situations is compelling.

2. THE DIGITAL TURN IN FIRST LANGUAGE LEARNING ENVIRONMENTS

Evidently, digital means of communication had been in practice when the New London Group published their manifesto in 1996. However, with the massive expansion of computer technology in homes and businesses across the Western world in the last 20 years, scholarly interest has also grown exponentially in regards to these new methods of communication. Thus, despite the New London Group's measured scepticism towards the "the sci-fi visions of information superhighways and an impending future where we are all virtual shoppers" (p. 64), the extent to which digital technology would affect our everyday lives was not in their - and many other people's - purview. Moreover, as Leander and Boldt (2013) claim, the New London Group's design has been used to frame, and thus constrain, the possibilities of emergence and indeterminacy that may youths' out-of-school practices are engaged in. However, such short-sightedness on the NLG's part, particularly in regards to the digital realm did change, however, in the subsequent years when New London Group members such as Cope and Kalantzis (2000), Gee (2007; 2011) and Lankshear and Knobel (2006) began discussing the potential for digital communication technologies within literacy learning. As digital forms of communication such as databases, blogs, wikis, and online news sites began proliferating cyberspace, along with their various literacy demands, multiliteracy pedagogy became even more crucial to ensure that learners are able to interpret such media critically.

Thus, in recent years, scholars have begun to study how multiple literacies are needed to communicate effectively with digital technology. One significant contribution in the field is the *Handbook of Research on New Literacies* (Coiro, Knobel, Lankshear & Leu, 2008). In this text, a large number of scholars in NLS turned their attention to the fascinating ways students are able to

develop multiliteracies with digital technology. Indeed, the plethora of research documented in this hefty volume outlines numerous ways various forms of digital media (internet, text messaging, digital games) may develop multiliteracies. Of particular note is Snyder and Bulfin's (2008) investigation into the use of new media in English courses at the secondary level. In their chapter, Snyder and Bulfin highlight the theoretical underpinnings of integrating new media, and particularly ICTs in the English classroom, including new cultural forms such as digital, popular culture texts (i.e. video games) (p.822). The implications these have in the classroom, the authors argue, are significant in that they have the potential to integrate out of school practices and literacies within the school environment, and that "when teachers recognize young people as active participants in a range of textual cultures who bring expertise and skills to the learning context, they can encourage the students to remix, play around and engage critically with these textual practices (p.823).

The ability to remix a variety of different texts using different digital and non-digital modes may indeed allow students to expand upon traditionally restraining literacy practices. An excellent example of this occurs in Walsh's (2008) study in which she created a two-part project, where, in the first part, students created a podcast and had to storyboard a number of elements that would be accompanied with the audio podcast, allowing them to work with a variety of modalities. The second project consisted of teachers reading and discussing both traditional and more modern versions of fairy tales, allowing students to respond and create their own, using a variety of different creative modes such as cooking, drama, visual arts, and digital technology through the use of digital photography, filming, PowerPoint and even claymation (p. 104). Walsh claims that her study allowed students, and even teachers, to appreciate "multimodal

environments that were appropriate for our multimedia age but within the realities of their schools' resources and students' development" (p. 108).

Like Walsh above, Rowsell and Decoste (2012) conducted a study in a Grade 11 English class in which students were invited to expand upon notions of composition via a variety of different modes, such as visual, aural, and interactive. For instance, students were invited to interrogate the implicit and explicit messages in popular fashion and Hollywood magazines. Rowsell and Decoste claim this approach allowed the students to take part in "an active and iterative process of remix in that they remixed the content with annotations to insert their own voice into the popular culture text" (p. 253). Other examples throughout the study include students remodelling different technologies (such as double sided flat screens televisions so that parents may watch one side, children the other; a holographic wearable device; an Ipad on a stand), and students video recording a three minute monologue or rant in which students may express themselves with wit and humour (p. 255). Overall, the study demonstrated a variety of ways students might break out of the constraining "five paragraph essay on a canonical text" (p. 258) and employ a variety of multimodal digital and non-digital technologies.

Moreover, digital, multimodal analysis that permits students to play within a variety of modes can also allow them to articulate attitudes and perceptions around complex social and gender norms. In 2012, LMM members Lacelle and Lebrun (2012a) interrogated multimodal media competencies in a 5th grade classroom. Students using PowerPoint were allowed to integrate text, video, and images into their presentations to analyse the representation of people in the media. The students were allowed to select a stereotype from within the following list: ethnic minorities, hypersexuality towards women, blonde women, the idealized male, teenagers, and

generational stereotypes in the films of Denys Arcand. The study demonstrated that students were more comfortable describing stereotypes via image rather than written examples. More specifically, the authors argue that students sometimes succeeded in conveying their critical view of the representation or stereotype, but had difficulty in the articulation of iconic and written modes to express their arguments. The authors conclude that, via a media literacy pedagogy, students should be taught to: “1) équilibrer l’attention qu’ils portent aux images par rapport aux énoncés verbaux dans les textes multimodaux et 2) créer des relais de sens entre énoncé verbal, image fixe / mobile et éléments sonores” (p.50). In addition, the skills that they will develop in ‘semiotic competence’ should be leveraged to engender critical thinking in students, particularly as they move from awareness of a given attitude or stereotype to its construction via multimodal texts (p. 50).

Furthermore, digital multimodal technology has also provided a window into a variety of sociocultural issues among adolescent students in Quebec. In a 2012 study, Lebrun and Lacelle (2012b) demonstrate the diverse ways young people use French on social media in their everyday lives. The study looked at how French mother tongue language speakers, English mother tongue language speakers, allophones (Canadian residents whose first language is neither French nor English), and French and English second language speakers who use social media. Survey results demonstrate that French mother tongue language speakers and French second language speakers almost always use French in school, with their family and friends, as well as significantly in traditional media (television, radio, books, and magazines) use. Whereas the three other groups use it sporadically, preferring English. What is of particular interest is that, the predominance of French in the two mostly French speaking groups (French first and second language speakers) disappears on the internet among Québec adolescents, faced with the predominance of English.

More recently, members of the LMM have published two reviews on the skills specific to reading and writing in a digital context and on the characteristics of new digital genres (Lacelle, Beaudry, Brehm and Lebrun, 2017) which made it possible to explore and create a competency grid for multimodal media literacy in digital contexts. For example, multimodal competencies, such as the ability to understand, analyze, and apply the simultaneous use of modes (text, image, and sound) are added to the dimensions related to the specific digital medium or tool (e.g.: extracting the information from a web documentary, creating an online fanfiction, writing in hypertextuality). The synthesis of knowledge documented in these reviews serve as theoretical foundations for the understanding of new literary practices in a digital context as well as for the design of digital learning activities and exercises.

As discussed above, the LMM's investigations into digital media consumption interrogate the emergence of multimedia technology and the accompanying literacies around them within formal learning environments. Similarly, Koltay (2011) has interrogated the convergence of literacy practices, specifically media, digital and information literacy, yet draws important attention to the increasingly fuzzy distinctions between media consumers and producers (p. 211). Koltay, rather, argues for the importance of active producers of texts, as opposed to just passive consumers. Indeed, some studies have demonstrated interesting pedagogical initiatives that demonstrate aspects of this, such as the one conducted by Cooper, Lockyer, and Brown (2013). In their study they show how a digital, multiliterate pedagogy can provide meaningful learning experiences based on multiliteracies development. In their study, the authors introduced a multiliterate pedagogy where students had to create a 'Making News Today' project, which allowed them to analyze the way news media functions and produce their own news stories. This

project allowed students to enact digital, information, and media literacy. Students within the study found the project motivating and engaging, and were successful in the attainment of basic levels of technology, information and media literacy.

2.1. Digital Games in First Language Learning Environments

As the importance of digital literacy within multiliteracy development has risen in the last 20 years, given the predominance of digital communication via computer technology, one of the most intriguing developments regarding multiliteracy development has been in regards to digital games¹⁵. Digital game based learning (DGBL) has been a developing phenomenon within, and outside¹⁶, academia, and it first began gaining prominence through the works of authors such as Pensky (2001). DGBL has since been appropriated for the complex critical thinking, learning and literacy practices they can afford in L1 learning environments (Ferdig & Pytash 2014; Gee, 2007, 2011; Salen & Zimmerman, 2004; Squire, 2008, 2012; Steinkuehler, 2007; 2011; Steinkuehler, Squire, & Barab, 2012). Indeed, a meta-analysis conducted by Qian and Clark (2016), shows that a digital game-based learning approach could enact students' 21st century skills, defined as critical thinking, communication, collaboration, and creativity. Moreover, the recent trend to use games in L1 environments have inspired scholars to champion games and their ability to enact a “constellation of literacy practices” (Steinkuehler, 2007, p. 301-302) in which youth in particular are often involved in, while others state that digital games allow for meaning-making that can offer “multiple trajectories and directionalities” (Abrams, 2015, p. 354).

¹⁵ Digital games will be used as an inclusive term throughout this study referring to both physical games (i.e. CD-ROMS and video game cartridges that are used in consoles, computer, or gaming devices) as well as games that can be downloaded from the Internet and played on a computer and/or console.

¹⁶ Outside academia is referring to games created for learning in ‘out of school’ contexts such as for NGO’s, marketing, and healthcare.

Scholars such as Apperley and Walsh (2012) have argued that the use of digital games' paratexts (i.e. texts about specific digital games, ranging from blog posts to print publications) can function as an effective entry point into discussing digital gaming as a tool to develop digital literacy among young people, while adhering to literacy requirements of the official curriculum of the school system in Australia (p. 117). Other Australian DGBL scholars such as Beavis, O'Mara, and McNeice, (2012) show how one approach towards digital games in the literacy classroom is to consider them as cultural artefacts, analysing their narrative and aesthetic aspects, including their relation to other narratives in games and other literary modes or genres (p. 18). The authors also discuss the settings shared with others or alone that game playing provides, in addition to self-reflexivity about students as game players, where they discuss issues of value, ideology, and identity (p. 19). The authors also appropriate digital game theorist Ian Bogost's (2007), notion of procedural rhetoric, interpreting it as the ways in which players learn by following the logic of their games through game play (p. 19). More recently, Beavis, O'Mara, Walsh, Apperley, Bradford and Gutierrez (2015) discuss five projects that integrated digital games into the school curriculum. The projects ranged from allowing students to create games within their course to using drama to act as video game characters come to life on Christmas day, allowing them to develop "high levels of critical awareness about how they are positioned inside games by the game structures themselves" (p. 32). As the authors claim, this allowed the students the ability to subvert stereotypes through their drama work. These projects focused on the multimodal and multiliterate aspects digital games can engender in traditional school environments.

Similarly, Sanford and Madill (2007) interrogate whether using digital games as a point of engagement for adolescent boys can facilitate the attainment of multiliteracies and engage them

in effective learning. The authors position their study with regards to research that suggests boys are having difficulties acquiring traditional literacy skills (reading and writing). Thus, the authors question whether such a problem may not be misconstrued in that boys are actually quite often involved in non-traditional forms of literacy, such as the multiliterate practices around the use and/or creation of digital games. Their study revealed that rich multiliterate practices were indeed engendered through the play and creation of digital games which were developed most notably through the combination of different literacies (operational, cultural, and critical). This allowed students to become critical and self-reflexive about the different aspects of gameplay and creation, all done through the multimodal affordances such games provided.

In fact, even younger students are able to engage in various literacy practices when using digital games. In a study conducted by Peppler, Warschauer, and Diazgranados in 2010, 40 students enrolled in the grade two participated in a four-day unit on analyzing and critiquing digital games designed in a visual programming environment. Students played the game, wrote down their observations about what they like and disliked about the game, including what they would do to improve the game and on the last day, with help of the teacher, created a classroom rubric in order to evaluate games, which they used to vote on each game (p. 7). The study demonstrated that having students analyze and critique the games allowed them to operationalize other critical thinking skills frequently demanded in the English Language Arts curriculum.

Perhaps one of the most interesting scholars doing work in this regard is Toronto high school teacher Paul Darvasi. In a recent study, Darvasi (2016) used the digital game *Gone Home* to be analyzed as a literary text in his class. Students in his senior, high school English class had to apply literary concepts and terms that they would normally use for traditional print literature

such as characterization, mood and tone, and cultural allusions. Darvasi used the game so that students were allowed to take part in a number of multiliterate practices by taking screenshots, reading online reviews, analyzing the dynamics between image, sound, and music, all while commenting on the literary aspects of the game. In the end, Darvasi reports that the students' final presentations on the games were the best students presentations he had experienced, claiming that "students connected with the topics on a personal level as they demonstrated keen insights into family psychology, adolescent angst, teenparent power dynamics, and how historical circumstances can shape and affect the stories of our lives" (p.140). Moreover, most of his students, he claims, enjoyed the game, though there were also some who did not like the story and others who were indifferent to it. Regardless, Darvasi's work as a research-practitioner, demonstrates an important step in the use of digital games in L1 classrooms.

Despite the variety of multiliterate possibilities for digital games in English, first language classrooms, this subject needs to be studied more and in greater detail. Despite some of the studies discussed above, empirical research that demonstrates the use and analysis of digital games as literary and/or cultural artefacts is still nascent. Moreover, the acceptance of recognizing digital games as unique, literary texts, to be studied alongside other forms of literature has still a ways to go when one considers the public perception of digital games as causes for violence (Bushman, Gollwitzer, & Cruz, 2015; Ferguson, 2015).

2.2. Digital Literature in First Language Learning Environments

As academic interest in digital games has grown over the last 15 years, a corollary interest has developed within the growing genre of digital literature. Digital literature¹⁷ is, as its name suggests, literature that is produced and delivered through digital means. Unlike e-books whose creation is for the sole purpose of delivering print books electronically, digital literature are texts that are born digital; created on the basis of a computer code and read through a digital or interactive screen (Ensslin, 2014, p. 32). Though this genre is still relatively unknown by many in literary studies, foundational works such as Espen Aarseth's *Cybertext—Perspectives on Ergodic Literature* (1997) and N. Katherine Hayles *Electronic Literature* (2008) argued for the literary sensibilities that are present in many of these digital, interactive texts, as well as the self-reflexive practices they can afford about digital apparatuses. Indeed, Hayles (2007, 2008, 2010, 2012; Hayles & Pressman, 2013) has been crucial in establishing the field of digital literature within academia and has argued for the genre of digital literature in education, claiming that a shift in cognitive modes - one going from deep attention to hyper attention - is occurring in newer generations of students; thus, teachers need to better facilitate these students by integrating texts that not only - through their digital affordance - resemble the type of digital texts they frequently encounter in their daily lives, but allow them to adopt a critical stance towards digital media (Hayles, 2007).

In her article “Hyper and Deep Attention: The Generational Divide in Cognitive Modes”, Hayles (2007) effectively presents this argument through her characterization of deep attention

¹⁷ Digital literature will be used as an inclusive term throughout this project to refer to electronic literature, cybertext literature, and all derivations that refer to literary texts that are created and consumed through a digital and interactive medium. For an interesting discussion regarding debates in the difference of terminology, please see Hayles & Pressman (2013); Simanowski, Schäfer & Gendolla (2010).

and hyper attention. Deep attention is, as she claims, a cognitive mode that is traditionally favoured in the humanities (her discipline of instruction is English literature, though it could be argued deep attention is favoured in other disciplines), one in which students must concentrate on a single object for long periods, ignoring distracting stimuli, preferring a single stream of information and having a high tolerance for extended focus times. Hyper attention, on the other hand, is characterized by switching concentration between various tasks, with a preference for multiple information streams, while seeking a high level of stimulation and having a low tolerance for boredom (p. 187). Hayles explains this shift through anecdotal evidence of students consuming increased amounts of information via electronic devices, as well as by discussing research published by the Kaiser Family Foundation (2005) that suggests students are spending increasing amounts of time on electronic devices and are often multitasking, using various information streams at the same time. More recent publications have also confirmed this trend, noting that, for example in the U.K., people spend more time in front of screens than do sleeping (Office of Communications, 2014) and that children and young adults have been spending more time than ever before texting and using smart phones (Lenhart, 2012). The American, non-profit organization Common Sense Media claims that 89% of teens now own a cellphone while 70% use social media multiple times a day (Rideout & Robb, 2018, p.8). Similarly, Statistics Canada reports that 96% of Canadian youth use the Internet on a daily basis or own their own smartphone (Statistics Canada, 2018, p.13). More specifically, Common Sense Media (2015) claims that tweens (children aged 8-12) use electronic and digital forms of media the most, with 62% characterized as mobile gamers, heavy viewers, video gamers, or social networkers in regards to their media diets. Teens (aged 13-18) have a roughly similar media diet as 56% are characterized as gamers/computers users, social networkers, or heavy viewers (p. 17). Thus, despite the increase of electronic and digital media in students' lives, Hayles' solution to this is not

necessarily to surrender to the hyper attention mode over deep attention in our classrooms. Rather, she suggests using particular works of digital literature that can favour both hyper and deep attention, and moreover, can engender critical thinking of media and technology.

Similar to Hayles, Wolf (2018) has argued for a nuanced approach to battle the fears of youth being over stimulated and deeply entrenched in the hyper attentive mode. She, like Hayles, also argues for the benefit of both hyper and deep attention modes, highlighting the importance of the “biliterate brain” and fostering deep reading at an early age so that later in life, young adults are able to switch effortlessly between both cognitive styles as well as their attendant medium (p.177-178). However, unlike Hayles, Wolf does not advocate for digital literature nor the literary affordances digital games may provide to enact deep reading within a digital medium. Nevertheless, despite this absence, Wolf is an important scholar arguing for the necessity of youth to develop both deep reading among digital apparatuses rather than an anachronistic strategy that demands young people go back to the methods of reading used a century ago.

Thus, to develop a new strategy that may allow deep reading within new forms of digital media, the field of digital literature seems like a likely candidate. Within this genre of literature, there are a number of sub-genres, such as interactive fiction, hypertext fiction, and hypermedia fiction, each of which relies upon the interactivity of the player/reader to move the narrative forward. When one considers the amount of interactivity demanded within these texts, it may seem that the line between digital literature and digital games is blurred. Indeed, some theorists have provided methodological frameworks, attempting to clarify some of the distinctions between the two (Ensslin, 2014), while others refuse to characterize them within such problematic binaries (Salter, 2014). Yet, as in the digital game scholarship discussed above, some

emerging theorists (who will be discussed below) in digital literature are beginning to demonstrate how these types of texts effectively enact self-reflexivity and critical thinking.

Indeed, some in the field of digital literature have begun to demonstrate the ways in which certain texts can provide opportunities for a critique and reflexivity of a variety of sociocultural issues, particularly because of their inherent multimodality and interactivity. For example, texts such as *Inanimate Alice* (Joseph & Pullinger, 2005-2014), *Nightingale's Playground* (Campbell, 2010), and *Inkubus* (Campbell, 2014) present rich narratives where images, text, and music are presented through an interactive narrative experience, allowing readers/players to interact with particular discourses. As Fleming (2013) argues, these texts dramatize themes and issues such as peer pressure, bullying, body image, interaction with different cultures, and emotional dependence on technology. All of these topics are heightened and uniquely experienced through their interactive and multimodal features. Though never mentioned explicitly or empirically studied, one may speculate whether these texts can activate various literacies (critical, cultural, and technological) and demonstrate how, like certain digital games, they may function as unique texts that have the possibility to afford multiliteracy development.

While research into the pedagogical advantages of interacting with digital literature is in its infancy, a few researchers have looked at their importance as literary texts. For instance Boluk and Lemieux (2013) deconstruct elements such as narrative coherence and its relation to the real world within the digital work *Dwarf Fortress*. The authors argue that the text's game mechanics allow for an interrogation of philosopher Manuel Delanda's concept of realism and historian Hayden White's concept of narratology, claiming that the game presents a "nonteleological mode of history that rejects narrative coherence and the logic of progress in favor of a mode of

discontinuous and emergent complexity” (p. 149). According to Boluk and Lemieux, these elements are a crucial aspect of *Dwarf Fortress*, which players must inevitably accept through the illogical game mechanics. Boluk and Lemieux’s focus on game mechanics and its role in regards to the interactivity of these texts mirrors Apperley and Walsh’s appropriation of Bogost’s procedural rhetoric in the way that game mechanics and player/reader input affect the text in very specific ways. Indeed, such reciprocity can represent an active, rather than a passive role vis-à-vis digital media, and this active role in such texts may provide opportunities for self-reflexivity in players. Moreover, a certain reversibility engendered through these texts can highlight how one is not “simply passively responding to the pressures of accelerating information flow but using them for different ends the very technologies applying this pressure” (Hayles, 2012, p. 101).

In one of the few studies done to report on digital literature in the classroom, Ingrid Daemmrich (2007) discusses the effects of introducing digital literature to a first-year college writing class. Throughout the course, students read and analyzed hypertext fiction and poems, with some students claiming that genres like hypertext fiction made them reflexive of the role and influence of the reader/player on these narratives (p. 426). Thus, Daemmrich demonstrates how the students recognized the ways in which digital literature changes the dynamic of active writer and passive reader. Despite some claims by the students that the nonlinear narrative may be difficult to absorb, Daemmrich underlines the importance of getting readers out of their habitual comfort zones that have been traditionally established by reading in a traditional, linear fashion. This non-linearity is a crucial aspect in much digital fiction and is quite similar to some other online reading practices. Such a disparate form of reading has led some theorists to speculate about its cognitive benefits: “the mosaic structure of a web site with documents of divergent origin each with its own particular identity and time, the simultaneity of divergent

documents, artefacts, and media teaches us [...] to live with the coexistence of conflicting concepts, discourses, and cultures” (Simanowski, 2010, p. 231). Yet again, despite the possible multiliterate affordances digital literature may provide, little empirical research has been done.

3. THE DIGITAL TURN IN SECOND LANGUAGE LEARNING ENVIRONMENTS

Similar to how the digital turn has impacted multiliteracy development in educational contexts, many have begun integrating a variety of digitally interactive-based pedagogies in specifically L2 educational contexts. The contemplation of digital technologies’ roles in L2 environments started nearly half a century ago when large computer rooms began populating higher education (Levy, 1997). Digital apparatuses such as computers have inspired linguists and second language acquisitions scholars to create the field known as Computer Assisted Language Learning (CALL) in academia. CALL has focused on the pedagogical possibilities of computer technology in language acquisition situations. Ensslin and Krummes (2013) recount how CALL’s history could be characterized in three phases. Early approaches of CALL were typically behaviourist in nature, mostly using computer technology as an instrument to permit individual learners to perform drills or using them as a reading and writing tool for offline input and output. Through the 1980s, CALL centered on communicative, content-based, and task-based approaches¹⁸. And finally, through the 1990s and into the twenty-first century, with the expansion of the Internet, user-generated content, share-ware, and e-mail, CALL began to be used for a variety of pedagogies that afforded the possibility for socio-cognitive and collaborative activities (p. 295). More importantly, as with the rise in digital literacy in L1, some scholars (Hafner, Chik & Jones, 2013) have begun to argue for the ways in which digital, and concomitantly,

¹⁸ Task-based approaches refer to an activity, which requires learners to “use language, with emphasis on meaning, to attain an objective” (Bygate, Skehate & Swain, 2001, p.11).

multiliteracy development could be integrated into L2 contexts. Much of their argument relies on the fact that the “kind of reading, writing, and communication that occurs in online, digitally mediated contexts demands a different set of skills from those traditionally taught in language classrooms” (p. 813). Indeed, these theorists argue that whereas the use of computers and digital media have been used in L2 classrooms as an uncritical means to an end for communication, contemporary teaching and learning with digital technology must recognize the complex literacies involved when using such technologies. Though a variety of digital media may be used to achieve this, perhaps the most interesting over the last 15 years has been the use of digital games in the L2 classroom.

3.1. Digital Games in Second Language Learning Environments

Interaction through computers has always been a crucial aspect of CALL, however with the influx of digital interactive media, specifically digital games, a new vein of CALL has emerged, known as Digital Games Based Language Learning (DGBLL). DGBLL builds from theory and concepts developed in DGBL for L1 development, and applies them to additional language learning. Many of the notions used in DGBLL such as situated learning and meaning¹⁹ as well as collaborative learning, have been complemented with L2 theories such as comprehensible input (Krashen, 1994), interactive learning (Brown, 2015) and corrective feedback (Russell & Spada, 2006). These points of convergence between the two fields have created innovative and emerging scholarship that has fostered a uniquely interdisciplinary approach. However, this field is not as recent as some may think, with scholars publishing as far back as the late 1980s and early 1990s (Baltra, 1990; Hubbard, 1991; Phillips, 1987).

¹⁹ Situated learning, developed by Lave & Wenger (1990), posits that learning occurs in authentic, sociocultural activities and practices. Situated meaning is the principle that meaning is situated in embodied, contextual situations (Gee, 2007). Thus digital games can afford situated meaning and learning by creating virtual contexts and places to derive learning and meaning.

Nevertheless, over the last ten years, scholarship has grown exponentially, with a number of monographs (Peterson, 2013; Reinders, 2012; Reinhardt & Sykes, 2013) and special scholarly journals (Cornilie, Thorne & Desmet 2012; Reinhardt & Sykes, 2014; Thomas, 2010) dedicated to the subject.

Like DGBL, DGBLL scholarship is divided into a number of categories, genres, and subgenres related to the types of games used for learning. Arguably, the first major distinction between the types of games used in education, whether within DGBL or DBLL, is the difference between serious games and computer off the shelf games (COTS) (Boyle, Hainey, Connolly, Gray, Earp, Ott, Lim, Ninaus, Ribeiro & Pereira, 2016). Generally, serious games are games that are conceived for learning purposes, whereas COTS games are games that are conceived for entertainment purposes but are used in educational settings. In the context of L2 teaching and learning, serious games feature particular design elements that are specifically created for language learning (Cornilie, Thorne & Desmet, 2012, p. 247). Another, and perhaps more productive way to view this distinction, could be the one presented by Reinhardt and Sykes (2014) who present a framework with a three-part model that emphasizes the pedagogical affordances of each type of game, rather than a focus on the particular differences between the texts themselves. Their model is split into three forms of learning: game-enhanced learning (use of COTS games), game-based learning (use of education or learning-purposed games) and game-informed learning (game and play principles that are applied in digital and non-digital contexts exterior to what is considered a game (p. 3)). This perspective provides a more pedagogically-centered viewpoint towards the use of games in the classroom, making the games as a tool for effective learning as opposed to a pedagogical endpoint in themselves.

Though there are many language-learning possibilities derived from serious games and game-based learning, some have argued (Reinhardt, 2013; Squire, 2008; Thorne & Reinhardt, 2008) that COTS games may provide more effective learning. The reason being is that COTS games are texts that feature authentic language use, as opposed to language situations that are catered for learning and thus not necessarily authentic to real world experience. Indeed, within CALL scholarship, COTS games have been characterized by recent scholars, such as Chik (2011) as naturalistic. Here Chik is referring to “students’ pursuit of some leisure interest through a second or foreign language in digital environments in informal learning contexts, rather than for the explicit purpose of learning the language” (p. 835). Thus, games provide an immersive language learning experience in some ways comparable to someone immersing themselves in a community or situation that uses another language.

Before considering research about COTS, one must be aware of the different player configurations and genres that exist in digital gaming. The three general types of player configurations are single player, multiplayer, or massively multiplayer. The difference between the last two is that the latter is usually played on massive online environments where thousands may connect online. Moreover, given that they are playing within a virtual, stand-alone space, such a space is not left in suspension when one or many players exit, whereas simple multiplayer games are environments that require all players to be logged on at once.

Aside from player configuration, there are also a number of genres that exist under the COTS games category. Only those that are more prevalent in L2 studies and are most pertinent for my research will be discussed here. Of these, adventure games and role playing games (RPGs) are the most discussed, particularly given that they focus on story and language

(Cornillie, Jacques, De Wannemacker, Paulussen & Desmet, 2011) though simulation and management games, such as *SimCity* and *The Sims*, or *Farmland* also contain the potential for L2 development, most notably through vocabulary acquisition (Miller & Hegelheimer, 2006; Ranalli, 2008). In RPGs, players adopt the role of a character, frequently an avatar, and can customize it with specific equipment and abilities depending upon the game. Some of the more popular RPGs are massively-multi player online role-playing games (MMORPG). As some studies have demonstrated, MMORPGs can afford students opportunities to learn and practice conversational skills in the target language (Thorne, Black & Sykes, 2009), develop communicative competence, (Rama, Black, van Es & Warschauer, 2012), and improve listening, reading, and writing skills (Suh, Kim, & Kim, 2010). Though MMORPG games have significant affordances for L2 language use, they can present logistical issues, in that some schools may be reluctant, or unable, to allow their students access to such games during class times, particularly since many games involve a virtual economy that is tied to physical money. Also, given that MMORPG-type games can be vast and open-ended worlds, the ways in which they would be taught or integrated within a classroom may present some logistical challenges in relation to students sharing a specific task, not to mention the high costs of many of these games. Adventure and RPG (excluding multiplayer and massively multiplayer) games, however, tend to feature a shorter gameplay (in that it often does not take more than eight hours to complete, depending on the game), are less expensive, and are thus similar to the use of a short story or novel; in other words, texts that are taught in English courses.

3.2 Narrative in Second Language Learning Environments

It is also often the case that certain RPG and adventure games tend to be more narrative-based as opposed to MMORPG games. Indeed, narrative, via the mode of literature, has a precedent in L2 learning situations. It was first introduced in L2 environments through the Grammar Translation method in the 19th century, where a focus on translating sentences and sentence structure (syntax, grammar, etc.) was favoured using literary texts (Brown, 2015). The Grammar Translation method largely fell away as in L2 scholarship as a move to behaviourist, and finally more socio-constructivist approaches to L2 teaching and learning prevailed in academic scholarship. Yet recent years have seen a return to literature teaching in L2 classrooms (Khatib, 2011; Kyei-Blankson & Traore, 2011; Muthusamy, 2010; Soliman, 2012; Van, 2012) where a focus on larger sociocultural and sociohistorical issues and the contextual elements of language use have been brought to the fore. Moreover, some research has indicated that an emphasis on literature can lead to an improvement in reading and writing skills (Carlisle, 2010).

Progressing from the use of narrative via traditional print texts towards digital texts provides unique opportunities in the L2 classroom. Studies such as the one conducted by Kyei-Blankson and Traore (2011) demonstrate how combining CD-ROM technology with the teaching of a literary novel in an ESL classroom helped the students enhance their understanding and engagement with various aspects of the book (p. 565). Others have begun to look at the role of narrative in digital games and literature and its effect on L2 learning. One of the few scholars publishing on this topic is David Neville whose work (2009, 2010, 2014) focuses on creating culturally imbued, narrative-based digital environments for students learning an L2. Neville, like the NLS scholar Gee (2007), believes that digital games provide unique opportunities for situated

meaning and learning through the way that they contextualize knowledge in particular sites, thus giving language learners the ability to tie language with context. Neville's position is that the narrative mode is important for L2 teaching and learning as it reveals "not only that narratives are situated within specific social, cultural, and linguistic contexts [...] but also that these narratives are ultimately negotiated on a personal level based on the identities, needs, and unique subjectivities of people seeking entrance to these communities" (p. 453). Thus, what is particularly unique about digital games is that these aspects of narrative are afforded an interactive element, in that players can interact with the story, producing a narrative slightly different than another player and thus co-construct a story.

There are few studies that have been conducted in L2 environments that use adventure, narrative-based, COTS games. Some using quantitative methods have demonstrated that adventure games improved vocabulary acquisition (Hitosugi, Schmidt & Hayashi, 2014; Vahdat & Behbahani, 2013; Yang & Chen, 2012). Others using a mixed-methods methodology have shown that digital games can appeal to motivation (Guerrero, 2011; Sundqvist & Sylvén, 2014) and that students carry positive attitudes towards digital games as learning materials (Chen, Chen, Chen & Yang, 2013; Yang & Chen, 2013). However, few qualitative studies exist. Of the few that have been conducted, Piirainen-Marsh and Tainio (2009) found that digital games engender repetition that "serves as a resource for participation, in particular during moments when the game does not require immediate action from the players but unfolds through narrative sequences" (p. 165). Another qualitative study (Chen, Chen & Yang, 2009) conducted on pre-service EFL teachers, demonstrates that the pre-service EFL teachers' attitudes towards digital games were very positive and students identified several reasons why games could be used as a motivating tool for second language learning (p. 160). Overall, more research is needed in this

field, particularly studies that demonstrate explicitly how these types of games are integrated into pedagogy.

However, as deHaan (2013) has noted, though language learning via COTS digital games is a worthwhile research and pedagogical endeavour, it is very complex. Much depends on the types of games being used, as well as the pedagogical framework, including both pedagogical and extracurricular material (paratexts) surrounding the game. Thus, despite discussions of reading and writing activities around games, few of the studies using COTS adventure or narrative-based games detail the game itself, nor what about its particular narrative, mechanics, and multimodality afford it particular learning possibilities. Indeed, little is mentioned in any of these studies of what type of teaching design is implemented nor what pedagogical process of how to integrate them into the classroom. Moreover, none of the studies go beyond basic literacy affordances, nor do they question the multiliterate possibilities of digital games in L2 environments.

That being said, a few scholars have begun to theorize the multiliterate practices that may be possible for digital games in L2 environments. For example, Lotherington and Jenson (2011) discuss how digital games afford multiple literacy practices (p. 227) and that the informal literacy learning that occurs with these types of texts needs to be integrated into the L2 classroom. The authors argue that L2 classrooms frequently perpetuate ‘polarized binaries’, framing language into “pairs of productive-receptive skills (i.e., reading-writing, speaking-listening), and dividing learners into L1 and L2” (p. 233). Such concepts are manufactured in the social and linguistic worlds of flat literacies, the authors argue, claiming that today, online communities do not acknowledge these binary distinctions (p. 233). In the same vein, other authors such as Ryu

(2011) and Harushimana (2008) have conducted qualitative studies demonstrating the ways in which non-native English speakers communicate within beyond-game environments such as forums and chat sites, and that discussing games in these online environments afforded possibilities to bridge students' informal, as well as formal, literacy learning. Though these authors discuss multiliterate implications of DGBLL, they tend to be implicit and/or developed externally (via forums and chat sites), rather through the games themselves or developed in a classroom.

3.3. Digital Literature in Second Language Learning Environments

Despite the fact that it is a fairly new genre, some studies have emerged using digital literature in L2 environments. In a study conducted within a German L2 course, Ensslin (2006) demonstrates that digital hypertexts afford opportunities for learners to work on collaborative activities that improve lexical and stylistic L2 writing. Students in the course analyzed and created digital hypertext narratives and used oral skills when collaborating on their hypertext project. Also in a German L2 course, Neville, Shelton and Mcinnis (2009) conducted a study using interactive fiction demonstrating that the contextualized, immersive role play afforded with these interactive texts may have helped students learn German more effectively (p. 409). Ironically, this occurred despite the fact that the students felt the use of such a digital text was less pedagogically pertinent than traditional print-based texts, and felt that the use of digital texts were not relevant to learning a foreign language (p. 420). Despite their concerns, these students performed better than the control group who did not use digital literature. Interestingly enough, it appears that even the students themselves are at times sceptical about the use of digital, interactive texts in the classroom. This is significant in that it cannot be taken for granted that students will unequivocally accept and be motivated by these types of texts. That being said,

much lies in the selection of the types of texts and the pedagogical activities that surround them. However, more studies need to be done to demonstrate what, and how, these skills will be implemented and leveraged through digital literature.

4. ENGLISH TEACHING CONTEXT IN CÉGEP

The Collège d'enseignement général et professionnel (commonly referred to as college or the acronym, CÉGEP) system in Quebec is unique in North America. It functions as a post-secondary institution in which students, upon completion of their secondary school studies (which ends at grade 11 in Quebec), enrol in one of two programs: a pre-university program that usually takes two years to complete, or a technical program that usually takes three years. University undergraduate degrees are generally three years in length, so the total number of years of schooling remains equivalent to the rest of North America; thus, it is simply organised differently. Throughout the province, there are 43 Francophone and 5 Anglophone CÉGEPs. In both the Francophone and Anglophone institutions there are a number of general education courses students are required to take, regardless of whether they are in a technical or pre-university program. These courses are Philosophy/Humanities (4 required courses), Physical Education (2 courses), French First Language or English First Language (the former for Francophone institutions, the latter for Anglophone institutions, 4 courses each), French second language or English second language (the former for Anglophone institutions, the latter for Francophone institutions, 2 courses each). What is significant about this step in education is that students, regardless of their mother tongue language, have for the first time in their schooling the freedom to choose their language of instruction. The reason is that because of the language laws of the province's Bill 101, students born in Quebec must choose a French primary and secondary school. The law, however, does not apply to students who have at least one parent who attended

English school, or for students attending CÉGEP. This means that students who are raised in a home where French is the primary language, have, for the first time, the opportunity to study at an Anglophone college and to immerse themselves in the English language. Despite frequent threats by the nationalist political party, the Parti Québécois, to remove post-secondary's students' freedom to choose their language of instruction at CÉGEP, there has been no change to the law²⁰.

Regardless of the mother tongue language of the student, the fact that these aforementioned language courses are mandatory raises issues concerning extrinsic motivation (i.e. brought on by the courses being obligatory) versus intrinsic motivation (i.e. taking the classes solely because they want to learn the language). Indeed, on the basis of the limited research done on these courses (Bridge, 2012; Morris, 1998), specifically the English second language courses, Crisfield and White (2012) demonstrate quite effectively how motivation can have a profound impact upon students' perceptions of their courses. Their study focused on the two mandatory ESL courses at a Francophone CÉGEP. These two courses are known as A-Block and B-Block courses. The A-Block course, a prerequisite to the B-Block, is a general English and culture course. The B-Block, however, is a course intended to be related to the students' field of studies. Crisfield and White demonstrate how their students rate their B-Block course higher than their A-Block course, given because they considered the former to be more related to their field of study. Motivation is indeed a well-documented aspect of L2 learning and teaching (Dörnyei, 2009; Gardner & Lambert, 1959) and Crisfield and White claim that given that their students were motivated by an instrumental factor - the usefulness of the second course – it “supports the notion that

²⁰ It is interesting to note that Anglophone CÉGEPs have seen a relatively steady increase in student admissions, whereas many Francophone CÉGEPs have recently seen a decrease (Lacroix, 2017).

instrumentality is a valid paradigm to enhance motivation in students who are required to take second language courses” (p. 230).

Through there is a strong case to be made in how motivation is a determinant of L2 acquisition, some researchers believe that very little work has been done in the L2 field to devise and test motivational strategies systematically (Dörnyei, 2001, p. 51). Given this lack, Crisfield and White’s study of ESL motivation is a step in the right direction, particularly in understanding mandatory language courses issues in the unique context of CÉGEP. However, one cannot help but feel cautious when thinking of only using instrumentality as a paradigm in language teaching. Instrumentality can be a problematic approach for all language courses - whether first or second language - particularly given that, as some have argued (Simard, Falardeau, Émery-Bruneau & Côté, 2007), it can be a superficial, and thus, ineffective perspective towards teaching a language and its attendant culture. Such a perspective seems contrary to the Ministère de l’éducation et de l’enseignement supérieur (MEES) general objectives of all language courses (first and second language), in which, along with developing basic competencies in reading, writing, listening, and speaking, students also need “to become aware of the role of the media and technology in culture and lifestyles” and to “develop their critical and ethical thinking” (MELS, 2009, p. 22). Moreover, a focus on the development of critical thinking in regards to media and technology was emphasized by Quebec’s Liberal government in their *Politique de la réussite éducative* (MEES, 2017), highlighted in one of their policies to: “mieux intégrer les compétences du 21^e siècle et les possibilités du numérique” (p.43) Thus, what is implicit in the above pedagogical objectives and policies is a gesture towards developing a multiliterate approach that favours critical and ethical thinking and demands students develop a self-reflexive role to media and technology.

This is not to say that digital texts, or any technology, should be integrated blindly into the curriculum or that it can function as a pedagogical panacea. Indeed, as some studies have noted (Lopera Medina, 2014), depending on how technology is used, it may be as problematic, if not more, than traditional pedagogical approaches. An approach that uses technology as an end in itself, as opposed to a means to an end, needs to be considered in all second and first language courses to generate a critical, self-reflexive stance on the role of technology, as well as the multiliterate practices it may engender.

5. CONCLUSION

The expectation that English first and second language courses integrate technology into the classroom so that students may develop a critical stance towards it, as well as achieving the ministry's already-established course competencies, puts a large demand on CÉGEP teachers. However, the use of particular digital texts such as digital games and digital literature may function as 'convergent texts', in that they can afford a variety of possibilities for language and literacy learning, textual and literary analysis, and the ability to develop a self-reflexive stance towards technology. As noted above, these types of texts may afford not only multiliterate practices, but contain self-reflexive and thematically complex elements of language and culture that can be well integrated into English first and second language courses. Though this has sometimes been done through traditional printed texts such as novels, short stories, and poems, it may now be time to introduce interactive and innovative digital texts in these courses, given that they present similar themes, have the potential to promote similar cognitive processes, may allow a more active engagement, and afford the learning of a variety of multiliteracies. What has been presented above is an attempt to demonstrate the emergent, but limited documentation, on both the practical level (research detailing the multiliterate affordances of digital games and digital

literature teaching in English courses) and on the theoretical level (the possible convergence between a multiliterate framework and contemporary theories of English teaching and learning) when using digital games and digital literature in English teaching contexts. Thus, in light of the above considerations, the following research questions have been created.

6. RESEARCH QUESTIONS

What multiliterate articulations and affordances are engendered when using digital games and digital literature in a CÉGEP English course where there are English first language, and second language learners?

What theoretical points of convergence may occur between a multiliteracy framework that integrates digital games and digital literature, and contemporary second language acquisition theory?

CHAPTER TWO: CONCEPTUAL FRAMEWORK

The present chapter is split into two sections. The first section is comprised of a description of the conceptual framework that served as the pedagogical design that was implemented and modified throughout the study. The framework was largely derived from the New London Group's (NLG) four-step pedagogical framework. This will be explicitly detailed below while demonstrating how each step related to the present study. In addition to the NLG's framework, language teaching and learning theories will also be explicated in this first section, by articulating points of convergence between the NLG's framework and contemporary L2 theories such as Communicative Language Teaching and most importantly, sociocultural language acquisition theory. Moreover, other theoretical concepts that inform this framework include game studies concepts such as literary gaming and procedural rhetoric, which will be further discussed below.

This will be illustrated through a figure at the conclusion of this first section, demonstrating the various aspects of the pedagogical design, the contents of each section, and the theoretical underpinnings of each.

The second section will include an explication of the different literacies that were expected throughout the research study and during the data analysis stage. This section will present an explicit account of the different types of literacies that were expected to potentially emerge during this study. This will serve as a reference point for the data analysis, insofar as it demonstrates which literacy may be developed throughout the framework, as per its definition in the academic literature. Finally, the section will conclude with the research objectives that will be operationalized throughout the study.

1. NEW LONDON GROUP'S PEDAGOGICAL FRAMEWORK

Despite the fact that there have been some more recent scholarship and research on how to pedagogically integrate games into the classroom (Beavis, O'Mara, & McNeice, 2012; Farber, 2015; Ferdig & Pytash, 2014), this study used the original pedagogical framework developed by the New London Group (1996). The reason for this is manifold: first, given that the research focuses on multiliteracy development through digital games and digital literature, it seemed best to use the original multiliterate pedagogical design to document possible multiliterate articulations. Also, although the designs and models used by scholars such as Beavis, O'Mara, and McNeice (2012) or suggested by Ferdig and Pytash (2014) as well as Farber (2015) are impressive, the former's pinwheel model is complex and at times, confusing insofar as its practicality as a pedagogical tool is limited, whereas Ferdig and Pytash (2014) research focuses mostly on the relationship of different types of games (educational versus COTS) and their use within a variety of case studies. Farber (2015) provides a variety of interesting suggestions on using games in the classroom, but little is explicitly explained on how to teach narrative-based COTS games, particularly for multiliteracy development. Finally, the most appealing aspect of the NLG's framework is its simplicity, and thus, flexibility in that it can be adapted to be used with various genres of texts.

1.1. Situated Practice

The first pedagogical component the NLG discussed in relation to a multiliteracy approach is that of situated practice. This component takes into account the way knowledge is socio-culturally situated and determined, which thus focuses on learners' previous and current experiences, particularly outside of school communities and discourses, emphasizing their

importance within the school learning experience (New London Group, 1996, p. 85). Thus, knowledge is more meaningful when it is applicable to practice, and “is primarily situated in sociocultural settings and heavily contextualized in specific knowledge domains and practices” (p. 83). The importance of sociocultural settings relates to one of the crucial elements of multiliteracy development, that of multimodality. As Kress (2010) points out, multimodality is the combination of modes, each one “the result of a social and historical shaping of materials chosen by a society for representation” (p.11). Though this concept may be further explicated when teachers develop a metalanguage during the next phase (overt instruction), it may also be worthwhile to begin developing an understanding of the context and situation of particular modes, so that students have a foundational understanding of the term, and yet are also consciously aware of the importance of knowledge in relation to context.

1.1.1 Digital Practices

In contemporary terms, situated practice would relate to situating, as some authors have argued (Anderson, 2014; Doering, Beach & O’Brien, 2007; Robin, 2008;), the digital and virtual communication practices that students are already engaged in, and integrating them into classroom practices. Indeed, as Ohler (2008) claims, “Students inhabit a largely oral and digital world, then sit in classrooms where the printed word is the primary medium in play” (p. 10). Teachers, particularly language and literacy ones, can no longer ignore this trend. The importance of situated learning has been well documented (Lave & Wenger, 1991), particularly in relation to digital game playing (Gee, 2007). Indeed, it is through digital games that situated learning can provide a virtual experience that elides the binary between inside the classroom versus outside it, and thus learning may have the potential to be more pertinent and relatable to students.

The difference between inside the classroom versus outside is perhaps best represented by the print versus digital binary. Scholars such as Cohen (2007) have argued for the importance of bridging the gap between these two seemingly disparate forms. As Greenhow recounts, scholars such as Cohen (2007) and Taraborelli (2008) have created innovative concepts such as social scholarship. Social scholarship is a 21st century literacy that may connect “traditional formal scholarship practices (such as creating a peer-reviewed, print-based journal article) with more informal, social Internet-based practices (such as hosting an online video or audio conference discussion about a journal article” (Greenhow, 2009, p. 253). Indeed, attempts at bridging this divide are significant for teaching theory and pedagogy, but for teachers to embrace the ways students now make meaning outside of the classroom they must fully understand and appreciate the shift from print to digital.

Public institutions, such as academia, and private ones, such as the book publishing industry have long been dragging their heels to recognize the change from print to digital. All the while, some teachers and authors continue to work on the margins (Pullinger, 2008). This represents the inability to fully grasp the epistemological and ontological shift in reading from print to screen. Such a shift, as Vandendope (2008) points out, is favoured by the ubiquity of online access versus the inconvenience of carrying a book (p. 7), the fluidity of circulating, commenting on, and publishing, a digital text (p. 8), the hypertextuality of linking digital texts to other texts (p. 9), and its interactive and multimodal affordances (p. 12). Though these are not without their problems - namely that of editorial control of material - the shift towards digital texts and reading onscreen is occurring more and more, and needs to be reflected in the classroom (Lebrun, Lacelle & Boutin, 2012, 2017; Lankshear, & Knobel, 2008; Rowsell & Pahl, 2015). Thus, it is primordial during the initial phase of the framework that the classroom represents a

place that contextualizes - and reflects - real-world consumption and use of digital, multimodal texts, so that relevant situated learning and meaning making can be facilitated. Moreover, there needs to be an acknowledgment that our real world classrooms are often made up of students who speak one or more languages in a variety of contexts in their daily lives and who need to learn about a wide variety of literacies in order to further their studies and begin to function as literate adults in our society, as well as to enjoy the many leisure options of communicative material.

1.1.2. L2 Acquisition Theory

Thus, situated practice may also need to take into consideration language use and ability to appropriately reflect realities outside the classroom. Such contemplations in relation to situated practice dovetail with particular L2 acquisition theory and approaches, especially sociocultural theory and Communicative Language Teaching (CLT). Therefore, it would be worthwhile at this point to demonstrate how these theories demonstrate possible points of convergence between L2 acquisition theory and the framework developed here, demonstrating how they theoretically underpin this study's framework, particularly given their connection to situated practice.

1.1.2.1 Sociocultural Language Acquisition Theory

Sociocultural language acquisition theory focuses on the sociocultural factors that contextualize and effect second language learning and teaching. Prominent theorists in the field such as Lantolf and Thorne (2006) claim that such a theoretical framework attempts to “situate meaning not in language per se, but in concrete human activity in the world of social interaction” (Lantolf & Thorne, p. 5). Swain, Kinnear and Steinman (2010), also elucidate the concept of sociocultural theory claiming it as a theory “about how humans think through the creation and

use of mediating tools” (p. x). Such a theory is inspired by the central principle of Vygotsky’s (1978) theory, which claims that human consciousness arises through the dialectical unity of our biologically endowed brain and ‘auxiliary stimuli’ appropriated during participation in social practices. Indeed, as Swain, Kinnear and Steinman (2011) point out, Vygotsky’s focus on the relationships between “the individual’s psychological aspects and the social and culturally produced contexts and artefacts that transform the individual’s cognitive or mental functions” (p. xiii) have great import when considering meaning making. In other words, all artefacts used to mediate meaning, be they material (books, paper, computers) or symbols (language), are significant within sociocultural language acquisition theory, in order to understand the contextual and thus, real world uses of language and meaning making. Thus, humans use tools, both material (such as hammers, pens, paint brushes) and immaterial (such as language) to mediate between thought and reality. Sociocultural theory, therefore, is about the cultural and socially contingent ways these tools are used and their effects on meaning making.

Language as tool also has immense implications for the ways in which learners construct identity. Constructs and interrogations of identity in language learning have produced interesting research within the field over the last 25 years, with a number of journals, reviews, and books focusing on the topic (Cummins, 1996; Dörnyei & Ushioda, 2009; Peirce, 1995). Primary issues surrounding identity in language learning include interrogating the problematic binaries many language learners are slotted in (motivated/unmotivated, introverted/extroverted, inhibited/uninhibited), the ways in which relations of power affect identity construction, concepts of investment, and how the concept of imagined communities (Anderson, 1983) informs the concept of identity for language learners (Norton, 2013). Overall, these aspects demonstrate the

rich and complex elements teachers face in the classroom and are often at odds at how to overcome – or incorporate them – into their teaching pedagogy.

Identity is but another element that may be effectively negotiated with digital games. The construction and negotiation of identity has been a productive aspect in digital game scholarship (Barab, Gresalfi, & Ingram-Goble, 2010; Gee, 2007). A salient example of the ways in which digital games can provide effective avenues for identity negotiation occurs in a study in which Apperley and Beavis (2011) discuss character creation, particularly the ways in which game players can culturally imbue their characters. Apperley and Beavis recount how a student named Majida created a new character for the role-playing game *Sacred* (Ascarn, 2004). Majida created a new female character that used magic powers that were focused on a control over the elements of earth and evoked through a magic dance (p.137) and had an appearance that was noticeably Middle Eastern. According to the authors, Majida's character creation was a way of writing back to the game – a critical absence she had noticed on the part of the game developers, for there was a lack of Arabic and female characters, despite the fact that the appearance of the game was strongly Middle Eastern, in that it included deserts and palm trees (p.137). Her avatar was “both Arabic and sexy, evoking particular ways of being and femininity, connecting to her own sense of identity and self in the ‘outside’ world” (p.137). Here Apperley and Beavis provide an effective example of how a player is able to contest the game's lack of culturally-imbued characters, and thus fights for social identity within the game's discourse. Furthermore, given that identity is ‘mutually constitutive’, character creation in a game demonstrates the spaces that learners may open up to affirm identity which may not be heretofore provided in the classroom or through traditional forms of school practices.

1.1.3.1. Communicative Language Teaching

Differences between what students are learning inside the classroom versus what they will encounter outside the classroom has also preoccupied researchers in SLA. Thus, like sociocultural theory or identity negotiation above, emphasis on the authentic uses and practices of language is an especially crucial point within Communicative Language Teaching in SLA classrooms. Such an approach arose out of the 1980's and is primarily focused on extending beyond the "grammatical elements of communication in to the social, cultural, and pragmatic features of language" (Brown, 2015, p. 31). Others (Richards, 2005; Savignon, 1997) have also emphasized how CLT must be explicitly tied to authentic and contextual situations in order to prepare students in being communicatively competent in the real world. Thus, such an approach attempts to encourage 'real-life', authentic language use inside the classroom, incorporating elements that focus on sociolinguistic, discourse analysis, and strategic language use (Brown, 2015, p. 30). Both CLT and sociocultural language theory tie in effectively to the New London Group's concept of situated practice given their emphasis on contextual and authentic practices that need to be integrated into the classroom to prepare students towards understanding the ways in which such meaning making and communication practices are socioculturally situated and created. Yet, the ways in which SLA theory overlaps with the NLG's framework, particularly in how it relates to teachers being able to generate such learning through their instruction, requires further elaboration and will be further discussed in relation to this study.

1.2. Overt Instruction

The second component of the multiliteracy pedagogy proposed by the New London Group is that of overt instruction. As the New London Group states, this component includes

collaborative efforts between teacher and student “where they come to conscious awareness of the teacher’s representation and interpretation of [a] task and its relations to other aspects of what is being learned” (p. 87). Within such an approach, the teacher becomes a mediator for the students’ learning process, assisting learners in constructing and co-constructing knowledge amongst, and by, themselves. This echoes similar objectives in L2 acquisition (Brown, 2015; Harmer, 2007) where the role of the teacher as a facilitator in providing communicative activities while also acting as advisor (Larsen-Freeman & Anderson, p. 121, 2011) is crucial. Moreover, concepts often used in sociocultural language theory such as the zone of proximal development (ZPD) and scaffolding have particular importance during overt instruction. The former is defined as the “distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86). Similarly, scaffolding is the kind of process that “enables a child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his unassisted efforts” (Wood, Bruner & Ross, 1976, p. 90). As seen in both concepts, the role of the instructor or mediator is primordial in bridging students’ understanding and knowledge to build upon and create new understandings. Though this is fundamental to digital gaming, particularly for novice game players, students may also be quite adept at seeking out assistance from their immediate social circle of family and friends for learning support and help via online communities or discussion forums and blogs (Chik, 2014, p. 92). Thus, the ways in which students access and negotiate meanings with the teacher, among themselves, and/or through exterior means may prove to be rich in developing, and problematizing, the concept of overt instruction during this framework.

The New London Group emphasize the importance of metalanguages to overt instruction. The group defines it as “languages of reflective generalisation that describe the form, content, and function of the discourses of practice” (p. 87). Thus, in this instance, a metalanguage may assist in creating an explanatory framework via specific terminology for students to understand the ways particular elements of digital accessed knowledge are engineered (Bachimont, 2008) and how they are ‘deployed’ (Unsworth, 2006). Such a metalanguage has its roots in scholarship that highlights the different ways digital applications influence new ways of reading (Bélisle, 2011; Souchier et al., 2003), not to mention the influence such technology has on our ecology of attention with various modes and forms all vying for mental landscape (Citton, 2014). And yet despite, as Gervais and Saemmer (2011) eloquently point out, the challenges of developing a metalanguage to critically interpret these relatively new digital, cultural artefacts, the real challenges arise in the instability of a technology that is always transforming and evolving (para. 3).

With these concerns in mind, metalanguages will need to be established in order so that students develop the appropriate terms and vocabulary in relation to digital texts, how the functionalities and affordances of such texts are made available, the various forms of textualities and complex representations (Gervais, 2008) discerned through them, all the while unveiling the underlying power structures therein. This has immense importance given that these new modes of cultural texts appeal to new ways of reading and writing (Crozat, Bachimont, Cailleau, Bouchardon & Gaillard, 2011) that call for completely different conceptual, and possibly, theoretical perspective in the classroom. However, such a discussion among students needs to be scaffolded with accessible concepts and terms that students will be able to apply and can also relate to their current digital practices. Though many students are already engaged in certain

digital practices, when confronted with particular texts, the complex reading practices necessary for some interactive digital texts can, as some authors have noted (Rio, 2014), be destabilizing.

1.2.1. Procedural Rhetoric

Perhaps one of the most important concepts to assist in developing a metalanguage during the overt instruction period is that of procedural rhetoric. Procedural rhetoric is a concept developed by Ian Bogost in his influential text *Persuasive Games* (2007). Since the publication of his text, Bogost's concept has had an influence within different disciplines in academia. Fields ranging from literacy education (Apperley & Walsh, 2012; Beavis, O'Mara, & McNeice, 2012), to game studies (Flanagan & Nissenbaum, 2014; Sicart, 2011; Voorhees, 2009), and digital literature (Hayles, 2007; Ensslin, 2014) have appropriated or been influenced by Bogost's term. Procedural rhetoric builds from the term procedurality, defined by Janet Murray as the "ability to execute a series of rules" (Murray, 1998). Building from this point, Bogost adds the notion of rhetoric, with its inherent goal of persuasion, and argues that the main form of meaning production in digital games is uniquely delivered through "the art of persuasion through rule-based representations and interactions rather than the spoken word, writing, images, or moving pictures" (Bogost, 2007, p. ix). Thus for Bogost, digital games need to be understood through not only their content, but the interaction between the game mechanics and the players input, a dynamism others (Crozat, Bachimont, Cailleau, Bouchardon, & Gaillard, 2011; Saemmer, 2011) have claimed occurs on the level of semio-rhetorics: the way the digital content engenders meaning through explicit, multimodal and rule-governed interaction. Though Bogost acknowledges the importance of multimodality through games' use of the combination of written text, audio, and image as expressive elements in games, procedural rhetoric claims that digital games, as opposed to other multimodal texts, provide the particular ability to express meaning

and *persuade* players or readers through interactive processes delivered through the game mechanics.

Indeed, the profusion of digital texts has opened up new levels of interactivity between the text and reader, which more than ever questions the role of the author and the final interpretation of the text. As some have noted (Audet & Brousseau, 2011) contemporary digital media represents a new dynamic form of texts marked “par l’absence de finitude et d’horizon déterminé” (p. 20). Yet determinism is still at issue, with some (Sicart, 2011) critiquing the idea of a procedural argument produced through digital texts’ interactivity in that it is conveying one correct message to the player that waits to be discovered through its rules and mechanics. These critics further claim that following this logic, all players do is “actively complete the meaning suggested and guided by the rules” (Sicart, 2011), and thus such a formalistic and deterministic view implies that there is a ‘right way’ to experience a game. Nevertheless, what Bogost has effectively instigated is a dialogue around a concept that can provide a rich and fertile discussion in regards to the complex ways digital games and literature ‘work upon’ their players or readers, something that is completely unique to these forms of texts.

Yet perhaps the most significant oversight in Bogost’s conceptualization is the importance of play or ludic activity in relation to interactive technology. Indeed, many scholars such as Flanagan and Nissenbaum (2014), as well as Sicart (2014), have effectively emphasized the importance of play in digital games. The former emphasize that digital games are unique, hybrid artefacts that are part game, part “expressive art forms, and technological engines” (p. 9). Moreover, for these authors, it is only through play that the values embedded in them are revealed (p. 8). For instance, Sicart’s (2014) view is that it is only through play that games can

reveal their meaning, and in contrast to Bogost, it is through play they reveal their political or persuasive messages:

Like any other object or instrument or technology, games are political, but the true political effect of these objects takes place when we occupy them, that is, when they become instruments for political expression. The game or toy is only a rhetorical argument - political expression at most, if not propaganda. Politics happens when play becomes political action. (p. 73)

Indeed, play has been an important concept in not only game studies, but also within other disciplines throughout the social sciences and humanities. Foundational theorists in philosophy (Baudrillard, 1979; Derrida, 1966; Wittgenstein, 1958) and educational theory (Dewey, 1913; Piaget, 1951) have all made significant contributions highlighting the importance of play within their respective fields. However, the recent interest in play in relation to digital, interactive texts can potentially reveal opportunities to repurpose them to initiate digital, or electric, literacy.

In this regard, theorists such as Gregory Ulmer (2003) and Jan Rune Holmevik (2012) have recently begun to situate digital play within a new form of literacy, which they call electracy. Electracy relates to the competencies that are required in the new media-rich society in which we live (Holmevik, 2012, p. 3). Ulmer highlights the importance of play within electracy by claiming that:

Electrate pedagogy is based in art/aesthetics as relays for operating new media organized as a prosthesis for learning any subject whatsoever. The near absence of

art in contemporary schools is the electracy equivalent of the near absence of science in medieval schools for literacy. The suppression of empirical inquiry by religious dogmatism during the era sometimes called the "dark ages" (reflecting the hostility of the oral apparatus to literacy), is paralleled today by the suppression of aesthetic play by empirical utilitarianism (reflecting the hostility of the literate apparatus to electracy). The ambivalent relation of the institutions of school and entertainment today echoes the ambivalence informing church-science relations throughout the era of literacy (Ulmer, n.d., para.15)

Ulmer discusses how digital play resides in a binary often associated with entertainment and thus opposed to the 'business' of school. Thus, though play is an inherent element of digital games and digital literature, it may be seen as inappropriate within classrooms, given its reliance on playfulness and incommensurate with structured, formal instruction. And yet, it is extremely important to integrate digital play in the classroom as it can allow students to negotiate and critically engage with discourses, theories, concepts, and ideas in ways that are more accessible for many students today than print or other media.

Aspects of play and the ludic also have importance in second language acquisition theory. Scholars such as Cook, (1997), Bell (2005, 2011) have argued for play and humor (in the case of Bell) in second language acquisition. Correspondingly, studies conducted by Broner and Tarone (2001) demonstrate that language play may be helpful for L2 learners via the language and gestural cues (presence/absence of laughter, shifts in voice quality, use of language forms that are recognizable versus those that are new, etc.) that language play and jokes entail (p.518). In addition, Bell, Skalicky and Salsbury (2014) investigated multicompetency in L2 language play

via a longitudinal study of two L2 speakers. Bell, Skalicky and Salsbury appropriate Cook's (1994) coinage of the term multicompetency because it recognizes the multiple competencies a L2 learner must invoke to speak a second, or other language. In the study, the authors discuss how both participants "demonstrated sensitivity to context in their use of language play and awareness of the ways humour functions as a social practice, subtly adjusting their strategies to changing social situations" (p.72). Thus, the authors demonstrate the sociocultural implications of play for L2 learners, which may be harnessed into the classroom and further explored in the digital realm, particularly with digital interactive texts that may feature humour or language play within their narratives.

1.3. Critical Framing

As mentioned above, overt instruction gives teachers the ability to enact reflexivity and critical stances, which may then frame and facilitate the critical analysis students, may be ready to undertake with the texts they are encountering. This begins the process of critical framing, which for the New London Group, implies that learners can constructively critique the theory they have encountered, account for its sociocultural specificity, and creatively apply it on their own (p. 87). Such a component can build students' knowledge of metalanguages like procedural rhetoric, for example, and be able to make connections to their own personal experience with digital texts. Thus critical framing also engages students in developing autonomy and confidence in their critical analyses. Similar considerations are addressed in reference to second language acquisition theory, particularly the CLT approach, which emphasizes the students' ability to develop autonomy and awareness of the target language (Brown, 2015) as well as the importance of students expressing their own ideas and opinions (Larsen-Freeman & Anderson, 2011). Moreover, it is important that students are provided with the necessary vocabulary, and thus,

metalanguage for these new modes and genres, which avoids simplistically transferring terms and typologies from one medium to another. Such considerations have been articulated by Scott McCloud (1994) when he cautioned against analyzing comics and graphic novels by simply using the terminology and typology of previous forms of media (i.e. traditional print literature, films). Indeed, students need to be exposed to new and emerging vocabulary and conceptualizations in order to understand the texts they are consuming.

1.3.1. Literary Gaming

Thus, to engender critical discussions of multiliteracies within particular games and literature, teachers must be aware of the particular affordances of the texts selected. One method to accomplish this is to teach digital texts that are in a sense ‘literary’; texts that are self-reflexive and contain themes that facilitate a critical commentary. Such a perspective builds from the argument that digital texts such as webpages, inherently facilitate a critical and reflexive stance through their “multiple, multilayered, and semantically complex” ways of providing information (Burbules, 2002, p.76). This formal characteristic, coupled with content that is considered literary (through its thematic and/or narrative development), provides a unique type of text. One of the most effective analyses of both digital games and digital literature in regards to parsing out the formal versus content aspects is Astrid Ensslin’s *Literary Gaming* (2014). Ensslin developed the term ‘literary gaming’ to establish the types of digital interactive texts that contain ‘literary’ elements or can be considered authentic, literary works. Avoiding the problematic project of slotting digital texts on a specific binary of either game or literature, Ensslin shows the extent to which particular works of digital games and digital literature are particularly literary and/or ludic. The literary here is crucial for Ensslin, for the more critically, creatively, self-reflexively these texts engage with other texts via intertextuality, and the more these elements are interwoven

either explicitly or implicitly into their gameplay, the more ‘literary’ they may be (p. 49). In short, for Ensslin the self-reflexive aspect of these texts, like most effective works of literature, refer to (and comment) on other texts, or prevalent sociocultural themes.

Moreover, narrative, and more specifically, narratology²¹ is an important concept for Ensslin’s literary gaming. Ensslin builds from work by narratologist Marie-Laure Ryan’s (2006) conceptualization of functional ludonarrativism: a combination of the narratological and ludological²² conventions, and the ways in which they interact in digital narratives. For Ensslin, Ryan’s approach is not fully elaborated in her works and more importantly, does not include, what Ensslin terms, “poetic artifacts beyond the narrative contents and structures of digital media” (p.12). Thus, in literary gaming, Ensslin focuses on a functional ludostylistics method of analysis, which contains elements of ludology, ludonarratology, ludosemiotics, and mediality. These elements highlight why digital, interactive texts, featured from a literary gaming perspective, are unique through their ability to incorporate play (the ludic) and literariness (narrative, self-reflexivity).

Thus, certain works of digital games and digital literature that were considered for this project were chosen with Ensslin’s perspective of literary gaming in mind. More importantly, these works of digital, interactive texts contained themes and subjects analogous to those seen in literature, which may engender a self-reflexive and critical interrogations. Furthermore, these texts can also allow students to ‘interact’ with these themes and subjects, by playing or reading the text. This last part is crucial to Ensslin’s literary gaming as she explicitly appropriates

²¹ Narratology is the branch of literary criticism concerned with narrative and its function in particular works of literature.

²² Ludological refers to the aspects of ‘play’ and how ‘play’ can be analyzed and discussed within a game.

Bogosts' (2007) concept of procedural rhetoric, in that throughout her project, she is concerned with analyzing artefacts that she terms as part game, part digital literature, and that are

persuasive: their ludic mechanics and semiotic structures are designed in such a way that they afford and demand critical, reflexive, and meditative play and seek to persuade the player, through algorithmically grounded interactions, to understand and internalize their artistic and aesthetic message (p. 130)

These elements distinguish these games from other COTS games, given their 'literary' and self-reflexive affordances. Literary gaming is thus an umbrella term used for these types of games and is therefore situated in critical framing, given the similarities to the practices discussed by the NLG. It could be argued, however, there is some overlap with overt instruction. During the overt instruction phase, students must develop a metalanguage or theoretical vocabulary in order to critique their own games. Following this, they may account for its sociocultural specificity, and creatively apply it on their own. Finally, once students understand and internalize these particular types of games' messages, are able to autonomously apply them or similar concepts and themes to current forms of digital reading/writing habits, they will then be ready for the final part of this pedagogical framework, which involves the application of their knowledge, through transformed practice.

1.4. Transformed Practice

As the New London Group's pedagogical framework progresses, one may observe a corollary progression moving towards higher-level cognitive processes. Earlier in the evolution,

lower order cognitive processes may be enacted such as identifying, understanding, and interpreting, but as the framework reaches its end, higher order cognitive processes such as synthesis and finally, creation may take place (Anderson, Krathwohl, & Bloom, 2001). It is at this stage that the last component from the New London Group's pedagogical, multiliteracy framework, transformed practice can occur. Here, students re-create a discourse for their own purposes, and in doing so transfer previously developed meaning-making practices in other sociocultural contexts or sites (p. 87-88). Such a description gives both unique opportunities for students to develop their understanding of what has been developed previously and allows them to apply them to their unique situations and/or contexts, all the while respecting and applying the theory and concepts previously mentioned. Rowsell (2013) suggests some notable ways in which particular tasks can demonstrate aspects of transformed practice, when she examines the ways in which professionals within various creative industries engage in multimodal practices (p. 78). Her analysis provides examples of tasks that can be fitted in and outside the classroom when using various types of cultural texts (e.g. film, songs, digital games). One such example discusses how students using a digital game may perform a simulated recall activity. This is where one student talks while playing a game as another student takes notes. After gameplay, both students debrief on gaming practices (p. 93). Their debriefings can take the form of a posting on a blog or wiki where they discuss gaming elements, as well as themes and concepts therein, and can explain how to succeed or overcome a difficult part of the game. These types of tasks provide an excellent opportunity for students to engage in problem solving, meta-cognitive, and communicative activities, while discussing some critical notions of the framework discussed earlier.

Indeed transformed practice can provide possibilities for students to demonstrate their understanding and application of terms and concepts discussed during the overt instruction and critical framing phases, and particularly provide them with opportunities to take part in reflective and metacognitive exercises. For instance, using Rowsell's example above, having students communicate orally through gameplay, while another student writes down notes and adds them to a blog or Wiki, opens up the possibility for a reflection about practice, or what the New London Group call, a "re-practice, where theory becomes reflective practice" (p. 1996, p. 87). Indeed, such re-practice may provide effective examples of students demonstrating their understanding of theory.

2. CONCEPTUAL AND PEDAGOGICAL FRAMEWORK

With the above definitions of each pedagogical step of the NLG's framework, including possibilities of concomitant theory and terms, the following figure (figure 1) has been created to assist in an understanding of the content and pedagogical considerations for each step of the framework. This does not necessarily mean that each step was implemented with only these explicit terms and concepts in mind. Rather, it functioned as a general road map for possible points of convergence.

In looking at the figure, one can see that each square box superimposed above each quarter section represents the concepts that have been discussed above in relation to each step of the framework. Though these concepts were discussed as though they are tied to each pedagogical step, they need not be. Rather, they share some theoretical connections (e.g. re-practice and metacognitive activities can be seen to align well with the definition of transformed practice). Again, they serve as pedagogical markers to consider when preparing to instruct with

the design. The arrows that gesture from one step to the next demonstrate a progression that, and as will be discussed in chapter four, essentially directed the pedagogical framework as a teaching tool, going from one step to the next. However, it is not necessary to conceive each step as a unilinear direction. It may be conceivable - yet it was not done during this study - to start conceiving of instruction from any given step, and move organically from that step to another. Nevertheless, the figure below serves as a visual representation of the concepts in order to visualize the actual literacies and concepts discussed.

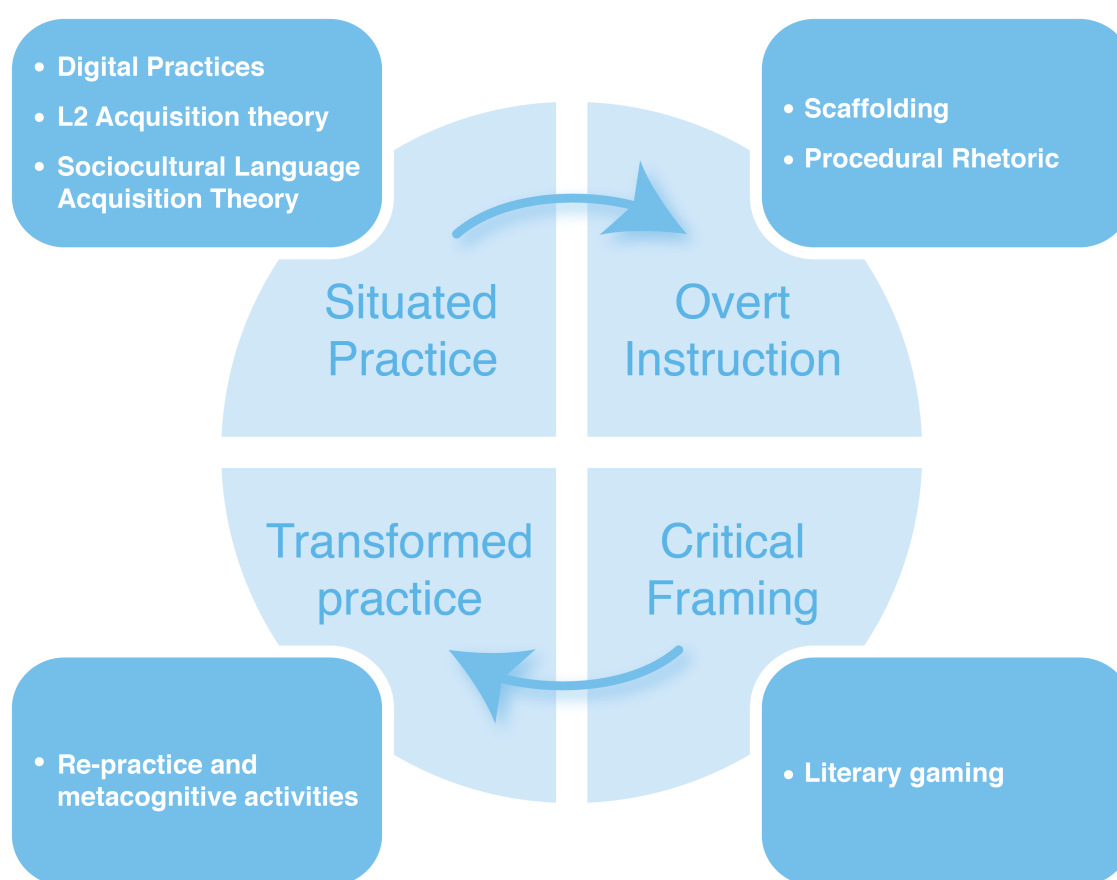


Figure 1. Conceptual and Pedagogical Framework

3. DEFINITION OF MULTIPLE LITERACIES

Though it has been referenced to many times, it has not been made clear exactly what specific literacies are at play when the term ‘multiliteracies’ is used. Depending on the author and their purposes (and/or disciplinary biases), there may be a number of literacies at work within a given study or project. For instance, though authors such as Steinkhueler (2007, 2011) and Squire (2008, 2012) explicitly promote the literacy affordances of digital games, how and what exact literacies are being engendered when using digital games is vague. Thus, this section will elucidate the various literacies that were anticipated during the project, as these were conceived to be used as thematic categories for the data collection process²³.

Frequently, when different authors imply different literacies in regards to multiliteracies, there is indeed some overlap. For instance, authors such as Koltay (2011) focus specifically on media, digital, and information literacy when he discusses multiliteracies, given that, as when Koltay claims, they are the three most predominant concepts that open up a critical approaches to media messages (p. 211). Many authors, including the New London Group, are reluctant to explicitly define what specific literacies they are referring to, choosing rather to refer to general issues such as the massive changes in the technological media as well as its ancillary connection to globalized power. Similarly, Taylor, Bernhard, Garg and Cummins (2008) refer to multiliteracies as “new, multimodal forms of literacy associated with information, communication, and multimedia technologies and, equally important, the variety of culturally specific forms of literacy associated with complex pluralistic societies and a globalized economy” (p. 274). Thus, the purpose of this section is to explicitly articulate the type of

²³ The data collection process and procedures will be further discussed in chapter three.

literacies that were considered when conceiving this project. All of this will be done under the theoretical support of a variety of theorists' calls for multi-semiotic and multi-textual literacies that demand new epistemologically founded frameworks and a re-examination of not only traditional literacy practices, but multiliteracy learning and teaching, including their potential implications for second language learning.

3.1. L2 Literacy

Before discussing the more complex formulations of literacy, it would be worthwhile to discuss basic L2 literacy given the fact that L2 learners were involved with this project. Despite the fact that the study took place in an English language institution, a number of students who attend the school are L2 learners. Indeed, this reality is often the case in many contemporary English classes given that an increasing number of students speak more than one language at home. Such bi- or multi- linguist realities have put justifiable pressure to loosen rigid linguistic techniques of contemporary English pedagogy and consider more fluid approaches and techniques, such as translanguaging. Translanguaging is a term developed by Cen Williams (1994) that gained more popular attention thanks to Baker (2001) and García (2009). It denotes the process in which two languages are used dynamically to help mediate learning. Moreover, as Lewis, Jones, and Baker (2012) claim, it “reflects the growing belief that content and integrated language learning (CLIL) is preferable to second language learning lessons both for successful language learning and the potential academic achievement gains when both languages are utilised in a lesson” (p. 643). Translanguaging may have significant benefits, particularly in an environment where the majority of students are able to use both languages. However, this assumes that all students share some knowledge of the first language. It might be – and is often the case – that some L2 learners in a classroom may not necessarily share the first language when

attending school to learn or improve upon their second language. Nevertheless, research in translanguaging points to the ways in which prior conceptions of the rigid binaries between L1 and L2 learners are in some ways problematic (Garcia, 2009).

Thus, considering the context of this study, L2 literacy as a category among the many literacies needs to be established and documented when enunciations or moments that relate to L2 teaching and learning are connected to digital games and digital literature. Indeed, an important aspect of this study is the ways in which the work of digital games, digital literature and the various literacies they engender, may converge with elements of L2 teaching and learning in this context. It is important to point out that while the institution where the study took place offers English first language college level instruction, the students attending the class were not required to demonstrate a mastery of English before enrolling. In addition, the official mandate of the college is to educate English-speaking students and not to teach English to French-speaking students. Therefore L2 language teaching cannot be an explicit part of the curriculum for literature courses, although the reality of the student body means that it is a very present, if discrete one. Thus, particular attention must be paid not only to points of convergence in L2 teaching and learning theories (such as sociocultural language acquisition theory, discussed above), but also to L2 practices that may be categorized in this framework as L2 literacy.

3.2. Media Literacy

Moving from other forms of literacies related to the project, it would be important to discuss media literacy. Media literacy is perhaps the most discussed literacy in multiliteracy development. Media literacy is a complex form of literacy and has a number of definitions each one varied depending on geography. For example, in the United States, the National Association

for Media Literacy Education (NAMLE) defines media literacy as “the ability to access, analyse, evaluate, and communicate information in a variety of forms [and] is interdisciplinary by nature” (NAMLE, n.d.). In Europe, the European Commission defines it as the “ability of people to access, understand, create and critically evaluate different types of media” (European Commission, n.d.). Closer to home, the Canadian Mediasmarts commission, a public-private conglomerate, defines media literacy as the acquisition of a number of skills “to *access* media on a basic level, to *analyze* it in a critical way based on certain *key concepts*, to *evaluate* it based on that analysis and, finally, to *produce* media oneself” (Mediasmarts, n.d.). All of the above definitions tend to repeat the same action verbs: ‘access’, ‘analyse’ and ‘evaluate’, that evoke higher, active levels of cognitive processes (Anderson, Krathwohl, & Bloom, 2001) as opposed to lower level and passive cognitive functions. Furthermore, it is interesting to note the similarities between the Canadian and European definitions, particularly their inclusion of creating/producing, which is not found in the American one.

An emphasis on the active, rather than passive, consumption and production of digital media is crucial because of its pedagogical implication (Baylen, 2015). Given that learners must be able to recreate discourses, particularly in transformed practice, the shift from passive to active is inextricably tied to conceptualizations of media literacy and thus, multiliteracy pedagogy (Doering, Beach & O’Brien, 2007; Rowsell, 2013). Indeed, after reading/playing digital literature and digital games, students need to be able to analyse, access and evaluate information and discourses in relation to the texts they encounter, and then repurpose them, for a variety of contexts and situations. Given that these texts will be provided through digital means, this invariably leads to an understanding of digital literacy.

3.3. Digital Literacy

Most contemporary definitions of media literacy inevitably invoke the digital within their conceptualization. This is evident given that most mediatized images people consume on a daily basis come from digital apparatuses. Media, the pluralized form of medium, signifies a multitude of channels from which information is diffused. One medium that is often the most predominant that people use to consume information is the digital medium. Thus, with the profusion of digital media, contemporary New Literacy Studies scholars such as Lankshear and Knobel (2008) emphasize the need to be literate within this medium. They, however, pluralize the term and refer to ‘digital literacies’ which allows them to consider not only the skills involved in using digital communication, but as with definitions of media literacy, they refer to the diverse “social practices and conceptions of engaging in meaning making mediated by texts that are produced, received, distributed, exchanged, etc., via digital codification” (p. 5). Thus, digital literacies for Lankshear and Knobel need not simply refer to the superficial difference of reading and writing on digital apparatuses, but rather, refer to the practical and even epistemological break from traditional ways of gathering and sharing information, one that includes the creation, diffusion, and sharing of information, facilitated through such a medium. Indeed, the all-encompassing, pluralized term takes into consideration the heterogeneous accounts of digital literacy, the sociocultural perspective of which literacy is best understood as *literacies* (i.e. the social and cultural aspects of all or any particular literacy), and the education benefits that may be garnered from establishing a more expansive perspective on the term (p. 2).

That being said, critics such as Goodfellow (2011) warn against conflating the various ‘literacies of the digital’, within digital literacies, including information and communications

technology (ICT) literacy, technological literacy, information literacy, media literacy, visual literacy and communications literacy (p.134). Goodfellow's criticism is significant for this study, in that though digital literacies may be used as shorthand for all of these practices, it risks unintentionally eliding the important practices, epistemologies, and power dynamics behind, and supported, by each one. Similarly, others such as Abrams (2015) also acknowledge the ambiguous boundaries of what constitutes digital literacies and suggests that the core meaning of digital literacies must include "the socially, culturally and economically situated practices that involve technology– and the critical understanding of technology – as a vehicle for learning and meaning making within and beyond school walls and computers screens" (p. 359). Thus from this perspective, digital literacies, much like multiliteracies, signify a complex series of various literacies, all funnelled through a digital medium, including all its composite techniques and practices.

3.4. Technological Literacy

As alluded to above, technological literacy is inextricably tied to digital literacy given the ways in which digital apparatuses are a form of technology. However, technology is a larger, umbrella category. For instance, all digital tools are considered technology, yet not all technology is necessarily digital²⁴. Such a difference is important in that discussions and conceptualizations of digital literacy can lead to technological literacy, allowing students to develop a literacy to discern the ways that technology is present so that they can "become aware of the role of the media and technology in culture and lifestyles" (MELS, p. 21). Koltay (2011) has argued effectively for the ways in which technological literacy is crucial for the development of a critical

²⁴ If technology is defined as "The application of scientific knowledge for practical purposes, especially in industry" (Technology, n.d.), one may be able to conceive as non-mechanical tools as technology, such as blackboards, given that they originated by the result of scientific knowledge.

approach towards media messages. In point of fact, one cannot understate the importance of being able to evaluate and critique different forms of technology, in order to access its emancipatory, as well as constraining, potential so that, as Koltay claims, one is not “a prisoner of prior tools and resources”, and can make “intelligent decisions about the adoption of new ones” (p. 218). Moreover, authors such as Dakers (2006) argue against the tendency of young people to perceive technology on a superficial level, simply in terms of its artefacts, and that they often do not see “technology in terms of the knowledge and processes that create these artefacts” (p. 1). Dakers further claims that technology education is complicit in the lack of assistance to help students to develop critical tools, given that the predominant focus in technology education leans more towards the production of knowledge in relation to the creation of artefacts, which he believes, undermines the development of a critical attitude toward the technologically mediated world (p. 1). Thus, Dakers suggests that technology education must educate students in developing critical and analytical tools in regards to the role of technology. This needs not, as he claims, come from a negative, deterministic perspective. Rather, a more nuanced perspective that acknowledges both the positive aspects of technology (the extension of a largely democratic apparatus) with the negative (that such an apparatus can also facilitate the reach of global terrorism) needs to be implemented within all fields of study.

Similarly, a deeper, more fundamental epistemological understanding of the ways technology ‘engineers knowledge’ has been made by other theorists. For instance Bachimont (2007) claims that to fully understand the technological constructs that allow knowledge to come into being, one must first understand the ways in which it is made material, concrete, and scripted, and that such an ontological shift is pivotal when considering digital technologies and communication. This purports a foundational and radical perspective on technology that, though is important, may

be problematic for some college-level students who are mostly at the end of their teen years and often have difficulties understanding concepts such as literary themes, not to mention developing a complex and nuanced critical regard to media. This is not to say that Bachimont's perspective cannot fit within a college-level, English classroom, but one must be very careful of dosing this type of theorization and, as in most cases, it may be a question of degree as to how much it is emphasized and elaborated upon, particularly when there are students who are also learning the language of instruction.

3.5. Information Literacy

To be technologically literate in the 21st century also means that one must be information literate. In other words, not only is technological literacy a question of the way in which one uses and evaluates different forms of technology, but it raises the question of how to use technology to gather credible information. As Eisenberg, Lowe and Spitzer (2004) discuss, there is a wide variety of definitions of information literacy, yet most contain the idea that learners must be able to locate, evaluate, communicate and effectively use various types of information within various formats (p. 5). Similarly, Koltay (2011) notes that information literacy education needs also to emphasize the “critical thinking, meta-cognitive, and procedural knowledge used to locate information in specific domains, fields, and contexts” (p. 216). Thus, when considering information literacy, an emphasis is often put on the ability to recognize the quality of the message, its authenticity and also its credibility. Questions of authenticity and credibility have particular import in post-secondary courses when one considers the emphasis made on using reliable and legitimate citation and research sources for written productions such as essays and formal papers (MELS, 2009). Sources such as forums, blogs, and wikis are not traditionally

considered adequate or reliable for research related to class requirements. Often, and as is indeed the case in English, college-level courses in Quebec (MELS, 2009, p. 22), students interpret reliable sources in peer-reviewed or academic articles. However, one may wonder to what extent other digital reading and information gathering practices, which are not considered 'academic', could be discussed and integrated into the classroom, particularly in a second language context where authenticity of sources, and language function/use, is highly valued (Brown, 2015; Richards, 2005; Savignon, 1997).

Correspondingly, other scholars have noted (Kellner, 2000; Leu, Kinzer, Coiro & Cammack, 2013) that information literacy must involve the ability to gather information within rich and complexly networked environments while the person obtaining it must be able to use critical reading skills to determine what information is appropriate and effective for the task at hand. However, what seems to be frequently absent in the classroom is the informal information gathering practices people, such as digital game players, tend to use, often from non-traditional environments such as blogs and forums, to gather information and tips about the games they are playing, which also demonstrates critical reading. Involvement within these participatory, digital cultures (Gee & Hayes, 2011; Howell & Reinking, 2014; Jenkins, 2006; Squire, 2012) is becoming an increasingly commonplace, digital practice. Within these environments, people share and democratize information at a larger and faster scale. Yet for a variety of reasons, many of which are arguably legitimate, such a practice is rarely leveraged in the classroom, mainly because of the nature of particular evaluations and activities (e.g. research papers, critical essays, etc.). Given that these types of activities and projects require legitimate sources, and are essential for certain students' post-secondary, academic future, it stands to reason that an emphasis on these types of research practices is favoured. Yet, it might be valuable to introduce more informal

digital reading and writing practices into the classrooms as these reflect students' present, and future, online reading and writing situations.

3.6. Cultural Literacy

Cultural literacy as a form of literacy has been a contentious issue over the last 30 years. As a general issue, cultural literacy, as Lankshear and Knobel (2011) note, was concerned with the "kind of knowledge young people were thought to need in order to participate effectively in social life as active and informed citizens" (p. 15). Lankshear and Knobel allude to Hirsch's influential *Cultural Literacy: What Every American Needs to Know* (1987) as a founding text in defining cultural literacy. Indeed, Hirsch makes the argument that students need to become aware, and familiar, with a cultural canon. For Lankshear and Knobel, such a cultural canon is important to cultural literacy as it comprises "relevant cultural information that has high status in the public sphere" (p. 15). Hirsch, as well as many other New Literacy Scholars, have argued for the importance to not only be able to read letters and words, but to understand a word or phrase in a given context, and what cultural information is decoded from that word or phrase. Despite the fact that Hirsch himself identified as a Liberal Democrat (and not a conservative as some painted him to be), other Liberals in the United States took issue with his list of cultural texts that were "heavy on the deeds and words of 'dead white males' who had formed the foundations of American culture" (Liu, 2015, para. 9) and that Hirsch's concern was not necessarily literacy, but rather "power, control and elitism" (Giddings, 1988, p. 110). This became a microcosm for what was later came to be known as the Culture Wars of the 1980s and 1990s, when, most notably in literature, many argued for a more diverse, multicultural perspective of the literary canon. Though the necessity for a multicultural perspective versus the importance of general cultural knowledge has recently been debated, particularly in Quebec by scholars such as Baillargeon

(2011) who have echoed Hirsch's claims above, the critical interrogation of cultural literacy during an age in which information is dispersed through a multitude of channels remains crucial.

A valuable addition to the understanding of cultural literacy comes from Green's (2002) conception of a three-part literacy model. In an attempt to build towards a multifaceted literacy conception, Green proposes a three-part literacy project that contains operational, critical, and cultural components. For Green, the operational is what may be conceived as the traditional, or basic, form of literacy. Green defines it as the use and understanding of techniques and procedures needed to use the language as a means of communication. The cultural component focuses on meaning making in its context, focusing on the social practice involved, including questions of appropriateness given a particular context. Such cultural literacy also takes into account being conscious of particular rules of society, but also leads into how, and by whom, such rules are constructed, and thus could be considered sociocultural literacy. This self-reflexive and socio-normative element overlaps into the importance of critical literacy.

3.7. Critical Literacy

During the presentation of the multiple literacies above, the term 'critical' has often been explicitly or implicitly referred to. Much in the same way information literacy is implied within technological literacy - or technological literacy is implied within digital literacy - critical literacy is perhaps the most pervasive concept within all of these formulations. This final section on literacy presents issues surrounding critical literacy, to situate it as a general term, and its relation to English L1 and L2 learning and teaching. Moreover, studies done in relation to critical literacy and the use of technology will be discussed given their pertinence to the project. This is done to demonstrate the ways in which the all-pervasive term needs to be grounded in an understanding

of: 1) what is meant by critical literacy, and 2) the possible limitations of such a literacy, insofar as both may manifest themselves through the proposed pedagogical process and needed to be clarified before data collection can begin.

Critical literacy has a long history in education. Indeed, its origins reside in the idea that, first and foremost, literacy is a form of “discursive production which organizes ways of thinking into ways of doing and being” (Lankshear, 1993, p. 10). Here, Lankshear appropriates the important term discourse, mostly associated with fellow New Literacy scholar James Paul Gee whose work (Gee, 1990) on discourse in relation to literacy emphasizes the ways of being in the world that integrate identities and the ways that discourse is always more than just language. Indeed an analysis of discourse can, and invariably does, reveal underlying power dynamics (Gee, 1990). Thus such a conceptualization of critical literacy is heavily indebted to the work of Paulo Freire (1968 and Freire & Macedo, (1987) who developed the concept of critical pedagogy. Critical pedagogy emphasizes the analysis of language through a critical perspective, allowing learners to step out and develop a critical consciousness of ‘reading the word and the world’, understanding the multifaceted origins of words and discourse and their connections to oppressive power. This has been done with the aim of developing an emancipatory aspect to pedagogy, particularly for those who were in poor and marginalized situations within Brazil and Chile. Critical pedagogy has also lead writers like Green (2002) to claim that literacy learning is “always already political (although it may not yet be politicised ...)” (p. 69). However, though the ‘critical’ in critical literacy seems to be a given, it nevertheless needs to be made operationalized, or politicized as Green would say, for it to be in action.

Building upon the word, or linguistic mode, as well as the inclusion of images and other modes (multimodality), more recent scholars (Sipe & Pantaleo, 2008; Pantaleo, 2010) have tied multimodal texts such as postmodern picture books to critical literacy. The aforementioned authors examined the ways these types of texts engage the reader through self-reflexive, meta-referential elements of a text and the “blurring of the boundaries between author, narrator and reader” (p. 3). Indeed, the postmodern position has been particularly vibrant as a way to trouble binaries such as reader/author and the importance of revealing hidden conventions of power (Willinsky, 1991). Such a perspective overlaps with the definition of critical literacy proposed by Anderson and Irvine (1982) whom claim that critical literacy is the ability of “learning to read and write as part of the process of becoming conscious of one's experience as historically constructed within specific power relations” (as cited in Shor, 1999, p.2). Anderson and Irvine’s invocation of ‘reading and writing’ is, when one considers the date of their publication, in relation to traditional print reading and writing skills. However, if one modifies reading and writing to include the contemporary consumption and producing of digital information and the complex ways learners engage in those practices, such a definition has currency, especially when this is tied to their emphasis upon being conscious of the historical and power dynamics behind, and within, digital production and consumption practices. Critical literacy thus serves as the bedrock for all the other literacies in that a critical, self-reflexive gaze must be acquired to fulfil the needs of, for example, media literacy, technological literacy, as well as the pluralized form of digital literacies mentioned above.

Nonetheless, critical literacy and critical thinking, particularly in L2 environments, must not be spared being analyzed. Critics such as Atkinson (1997) have questioned the legitimacy of adopting particular critical thinking aspects in L2 courses as well as their uncritical acceptance by

L2 teachers and scholars. At the core of Atkinson's argument is a four-fold critique of critical thinking. The first part is that critical thinking is essentially a social practice. In other words, rather than a teachable set of behaviours critical thinking, as it is often envisioned, may be more of "an organic part of the very culture that holds it up as an admirable achievement - more at the level of common sense than a rational, transparent [...] teachable set of behaviours" (p. 72). Second, Atkinson discusses how current conceptualizations of critical thinking have been exclusive and can be reductive in nature. Drawing from contemporary debates in Feminist theory, Atkinson points to how critical thinking theory and pedagogy may also marginalize alternative approaches to thought and thereby favour the "masculinist, normativity of many current conceptions of critical thinking" (p. 78). His third point, and one that is most pertinent to L2 teachers, particularly those who are teaching in EFL contexts, is that given critical thinking is a culturally based concept, many cultures endorse modes of thought and education that are virtually opposed to critical thinking. Atkinson points to research undertaken in non-Western, and primarily, Asian countries, which inculcate nuanced differences about notions of individuality, self-expression, and using language to learn, all of which are fundamental to Western conceptions of critical thinking. In light of this, Atkinson suggests that cognitive apprenticeship might be a more suitable replacement to critical thinking. Cognitive apprenticeship is based on the idea that "all significant human activity is highly situated in real-world contexts", and that "complex cognitive skills are therefore ultimately learned in high-context, inherently motivating situations" (p. 87). This notion, Atkinson claims, is perhaps more natural in classrooms that teach discipline-specific writing and/or use computer-based technologies.

Criticisms regarding the existence of a multiliteracy pedagogy, specifically the teaching of digital literacy through the use of digital technology, have also been noted in specific teaching

contexts. In an important study on the use of digital technologies to teach digital literacy, Tan and McWilliam (2009) demonstrate how open adoption of such pedagogy should be nuanced by the particular socio-contextual situation of the school, the students, and the classroom. In their study, Tan and McWilliam observe two unique situations: one an elite, well established and high-performing school, the other a public ‘reception’ school, preparing new, migrant, ESL learners. Though both schools were situated at opposing ends of the socio-demographic spectrum, educators and/or students from both environments demonstrated doubts, concerns, and disinterest in using digital technologies for pedagogical purposes.

In the public reception school, one of the main concerns was that a focus on multiliteracy pedagogy, including both digital tools and multimodal texts, would be taught at the expense of the basics of language learning. The educators at this school felt that students should be taught basic language skills before venturing into digital technologies and multimodal texts, despite the fact that the students were often observed using their iPods during an information and communication technology (ICT) lesson. Thus, in this situation, the educators deemed that multimodal and digital engagement should be delayed until students acquire pre-literacy (alphabetic and numerical literacy, understood to be a necessary first step to other literacies).

In the elite school, the situation was almost the reverse. There, the students were the ones who shunned or were wary of the digital technologies. In this school, educators and the school administration were more than happy to provide a digital media lab for students to use, especially because, as Tan and McWilliam state, no elite school would like to be seen as “lagging in terms of their provision of technological support and affordances for students” (p. 217). Yet, despite the school’s commitment to have their students be digitally literate, many students balked at the

chance to partake in the media lab. As the authors note, the majority of the students “were less than convinced of its direct applicability or relevance to their performance in the high-stakes assessments that would determine their future academic pathways, and, hence, future success” (p. 218). Thus, where teachers and educators were wary of digital technologies in the public school, the opposite was true in the elite school. Atkinson, Tan and McWilliam’s studies suggest a more measured approach towards the critical thinking and multiliteracy development in educational settings, and teachers, as well as researchers, would do well to consider these implications. As the articles imply, the context of the situation must be taken into consideration, and there is no one-size-fits-all approach to the integration of these pedagogical tools and approaches in all classrooms.

4. RESEARCH OBJECTIVES

The specifics of how - and when - each literacy may be articulated throughout the NLG’s four-step pedagogical process are never entirely clear. As the process evolves, articulations and enunciations that signify or represent the various literacies mentioned may occur at various times throughout a project. There is not one pedagogical step, be it transformed practice or overt instruction, that may hold sole dominion of the engendering of one literacy over another. That being said, concepts such as procedural rhetoric, literary gaming and elements of second language theory such as CLT are more likely to be activated in one ‘step’ versus another. The purpose of explicitly articulating the literacies above is to provide a reference point, aspects of a potential coding process, for when, or if, students articulate various types of literacies when consuming and producing digital games and literature. Thus, such a proposed framework was considered to serve as a conceptual design to guide, and situate, the study within a formal educational setting, which also informed and presented the study’s theoretical, as well as

epistemological posture. The pedagogical framework functioned as a design to be implemented, but most importantly, modified and improved upon throughout each iteration, as will be further discussed in the subsequent chapter. Therefore, to accomplish this, the following objectives were created in order to carry out the project:

General objective 1: To implement and modify a pedagogical framework while documenting the multiliterate articulations and affordances that are engendered by it when using digital games and digital literature in a CÉGEP English course.

- Specific objective 1.1: as the pedagogical framework is implemented, to document what, and how, multiliterate articulations and affordances are engendered through such a framework and the ways in which the framework can be modified to better engender multiliterate teaching and learning using digital games and digital literature
- Specific objective 1.2: to observe and document the ways in which such a pedagogical framework demonstrates points of convergence between students' already established digital reading/playing practices and the ones activated during the course

General objective 2: To observe and document the theoretical points of convergence that may occur between multiliteracy pedagogy and second language acquisition theory during a pedagogical framework using digital games and digital literature.

- Specific objective 2.1: to document potential points of convergence between L2 teaching and learning, with a multiliteracy pedagogy using digital games and literature, including the ways in which these points of convergence can be expanded and improved.

CHAPTER THREE: METHODOLOGY

Capturing the ways in which a multiliteracy-informed pedagogical framework using digital literature and digital games is implemented and modified, while documenting many of the pertinent articulations and theoretical points of convergence, was a complicated task. The following section presents the ethnographically informed, design-based research methodology (The Design Research Collective, 2003) of the project. This research design was chosen in order to effectively implement the pedagogical framework proposed in the previous chapter and thus serve to operationalize the objectives mentioned above. Following this introduction, a number of the data collection procedures used will be discussed, each one with specific examples in relation to the consumption and production of digital games and digital literature. The chapter will also explain how the participants were recruited, the ethical procedures followed, and the justification for the analysis used.

1. RESEARCH DESIGN

The research study implemented an exploratory, design-based research (DBR) design. It was exploratory given that, as mentioned in the previous chapter, little research has been documented on exactly how particular literacies are enacted when using digital games and digital literature. Also, there have been no studies of this kind conducted in the context of college-level English literature courses in Quebec. Therefore, the exploratory nature of the study required a research design that appealed to both the theoretical and practical demands of this study. For this end, DBR was selected. DBR is a relatively new methodological design that is used for “understanding how, when, and why educational innovations work in practice” (The Design Research Collective, 2003, p.5). In other words, focus is on the ways in which DBR aims to

increase the transfer of education research into more effective pedagogy (Anderson & Shattuck, 2012, p. 16). Moreover, in DBR, meaning emerges and is enacted within the co-participation of “researchers, practitioners and participants in social, cultural and political contexts” (Jacobsen, 2016, para 5). These contextualized, collaborative and participatory elements have emerged most notably through contemporary scholars work such as studies conducted by Castro, Lalonde and Pariser (2016) and Lalonde and Castro (2015) who have been working with at-risk youth in the Quebec educational system. The authors demonstrate the ways in which mobile technology engendered a sense of agency within the students (Castro, Lalonde & Pariser, 2016, p.238) and that the integration of social media in an educational setting garnered feelings of control over the cultural objects they produced. These factors created a stronger connection between them and the traditionally disparate social and academic communities (Lalonde & Castro, 2015, p.40). More importantly, both studies demonstrate the strength of DBR in technological environments that allow not only students to explore and test the limits of their facility with the tools, but the teachers as well, for as the authors state: “The mobile technologies used in this project were not the cause per se of our understandings of (im)mobility; rather, it was the affordance of these technologies that challenged us as researchers and teachers to consider what these new ways of image-making and communication enabled” (Castro, Lalonde & Pariser, 2016, p.249). Thus, the creative aspects of using technology to (re)create cultural products, paralleled the research design that allowed teachers and researchers to innovate their pedagogy in order to properly facilitate the teaching and research.

Indeed, given DBR’s apparent efficacy in technologically mediated environments (Amiel & Reeves, 2008; Barab, Baek, Schatz, Scheckler, Moore, & Job-Sluder, 2002), as well as its focus on developing a pedagogical design with the active participation of the study’s participants

(Anderson & Shattuck, 2012), it was deemed that such a design may prove effective for the project. Moreover, the way in which DBR may cover the gap between research and practice, with the goals of innovation at its fore (McKenney & Reeves, 2014), made DBR an effective research design model for this study. However, before providing more examples of DBR in relation to education environments that use technology, it would be worthwhile to present some of the aspects of this relatively new research design.

In their comprehensive analysis of DBR, Anderson and Shattuck (2012) review basic features that clarify some of its contours. They first discuss the ways in which such a design is situated in a real educational context. Indeed, as other authors confirm (Design Research Collective, 2003; Hoadley, 2004; Sandoval & Bell, 2004; Yutdhana, 2005), the importance and recognition of authentic, real world educational contexts are primordial for DBR. This touches on another feature, that of the very strong interrelation between research and practice. This is highlighted by Anderson and Shattuck's focus on 'practical impact on practice', in which they appropriate Barab and Squire's (2004) claim that "design-based research that advances theory but does not demonstrate the value of the design in creating an impact on learning in the local context of study has not adequately justified the value of the theory" (p. 6). This emphasis on the distinctions between research and practice demonstrates one of the common themes that emerges in DBR, that of erasing the problematic dichotomies often found in educational research.

Indeed, the theme of troubling certain binaries in educational research is made evident by Anderson and Shattuck (2012). This is perhaps most prominent in their discussion of how DBR is typically featured as an educational design as well as the importance of testing it as a significant intervention. The authors discuss the importance of the intervention being the result of a

collaborative task between the researcher and practitioner or researcher and participants (as opposed to subjects). Thus, the traditional distinctions between researcher and practitioner, as well as researcher and participants are minimized. Also, the explicitness of the intervention by documenting “the time, commitment, and contingencies that are involved in the creation and implementation of the intervention” (p. 16) are primordial for the potential reproducibility of the intervention or multiple iterations. The latter demonstrates the importance of constantly reworking and modifying the design, while data is being collected in situ. Therefore, the distancing from typical hermetically-styled experimental research design is made evident here, in that repeated iterations of the design and interventions by the research/practitioner are heavily encouraged, as opposed to a one-off attempt at performing an intervention then documenting its results.

Anderson and Shattuck’s concerns is then followed by the next feature, that of DBR’s typical mixed-methods aspect. DBR tends to be ambivalent in relation to the particular choice of research methods used (Anderson & Shattuck, 2012, p. 17). Rather, an explicit concern in DBR is to use methods that link processes which have the ability to generate knowledge applicable to educational practice (The Design-Based Research Collective, 2002, p. 7). A mixed-methods design is most commonly favoured in DBR, as it speaks to its pragmatic nature. This is also reflected through the possibility of including its focus on authentic and meaningful issues (Anderson & Shattuck, 2012, p. 17). Therefore, DBR may use one or many techniques used in either, or both, quantitative or qualitative methodologies. One example of an extensive, rich, qualitative three-year DBR study was conducted by Barab, Baek, Schatz, Scheckler, Moore, and Job-Sluder (2002). In their study, they analysed the effects of a web-based community on pre-service and in-service teachers for the service of learning. The data collection techniques used

included field notes, interview transcripts, design artefacts, project record-keeping, meeting notes, email interactions, ethnographic observation of the online space, ethnographic observation of members in their classes, and interviews with the research and design team including teacher-users (p. 5). The exhaustive data collection process allowed the researchers to determine the following three implications: the first is that, DBR is an effective research design to analyze human interaction and meaning-making mediated by technology; the second is the emphasis on context. Indeed, Barab et al. discuss the importance of the researcher leaving “commitments at the door, or at least in the shadows, first understanding local culture and then bringing in the voice of reform opportunistically” (p. 24). Such a concern reflects the epistemological position of their study: one that was heavily conscious of its unique context, as well as its being informed by sociocultural language learning and literacy development. The third and final implication of Barab et al.’s (2002) study is that the outcomes of DBR are not simply the result of what is produced, but of the rich descriptions of the process or the ‘making of’ the design through the process of its implementation. In short, the implementation and considerations of this project were of utmost importance, evident through the stated general objective of implementing and modifying a pedagogical framework while documenting the multiliterate articulations and affordances that are engendered by it. Barab et al.’s (2002) study is one of the earlier formulations of DBR in a technology-mediated environment and demonstrates the ways in which it can effectively inform other projects that use similar content, techniques, and practices. Moreover, some of the scholars mentioned above (Barab et al., 2002; Lalonde & Castro, 2015) who have used a DBR methodology have favoured ethnographic observation methods in their research. These scholars’ work, and their particular attention to the multimodal, sociocultural facets of meaning making demonstrate the particular importance ethnography has in relation to DBR, and thus, this study.

1.1. DBR and Action Research

When analyzing the literature on DBR, one of the most common points of confusion and contention is its similarity to action research. Anderson and Shattuck (2012) speak to this, claiming that explicating the difference between the two is an important issue. The authors first indicate that the main concern of DBR is more in line with the promotion of a design and theoretical agenda, rather than the more immediate goals and needs of action research. This is a significant difference and speaks to particular aspects within the present study's objectives in the preceding chapters, which are to document and observe how the pedagogical framework proposed engenders, and can be modified to assist, multiliterate articulations using digital games and digital literature. Moreover, action research is more often than not, carried out by the teacher alone, as opposed to a researcher or research team working with the teacher or practitioner. However, it is possible for DBR studies to be carried out by the research-practitioner.

These differences aside, many similarities emerge between the two research designs. The most notable similarity between the two is the common 'meta-paradigm' of pragmatism. This is evident through the way they share many epistemological, as well as methodological foundations (Anderson & Shattuck, 2012, p. 17). Also, the practical nature of both designs place them in the field of applied research, in keeping with DBR - and action research's - purpose to address practical, real-world issues. It is this promotion of DBR within real, practical situations that gives it its appeal, particularly in situations using technology. Authors such as Amiel and Reeves (2008), Dede, Nelson, Ketelhut, Clarke and Bowman (2004), and Reeves (2006) all argue for the effectiveness of DBR in environments that feature digital technology as a tool for students learning. Indeed, as Amiel and Reeves (2008) claim, "educational technology research aimed at

examining the influence of tools in the educational process has offered little systematic advice to the practitioner” (p. 30), a sentiment articulated by many of the authors above. This is an issue also felt in computer assisted language learning (CALL), where authors such as Yutdhana (2005) investigated a methodology that effectively tests a teacher training model that integrates internet applications to teach English as second or foreign language (p. 169). Yutdhana’s article describes how DBR, though new and relatively untested in L2 learning environments, provides a more rich view of the learning environment given the diversity of research methods that may be used (p. 176). However, Yutdhana is explicit about some of its potential problems in CALL research, namely that DBR’s commitment to theory may make it complex in that CALL research often uses multi-disciplinary perspectives. Second, the complications of context can cause problems if researchers do not begin with a specific research plan (p. 176), and finally, given that DBR projects may take several years to arrive at a desired result, time and financial constraints can become problematic.

1.2. Concerns and Limitations of DBR

Similar to Yutdhana, other authors show that DBR is not without its issues and limitations. Wang and Hannafin (2005) distinguish four limitations. The first one being its short lifespan as a research framework thereby making it hard to evaluate its effectiveness, and given that it is an iterative design that may lack significant course correction. The next is the feasibility in the current education system made difficult by the presence of researchers in the classroom that can be distracting for the students and possibly even unnerving. One can, of course, argue that this is not unique to DBR. Similarly, the next issue the authors discuss is the designer’s, or researcher’s, influence not only on the participants, but on the design itself, in that some designers may be more familiar and/or comfortable with, for example, pedagogical methods, but

less familiar with generalizable theories or design models, and vice versa. This was a legitimate concern for this project given that the study was conducted in a classroom where the practitioner has more experience teaching than conducting research; thus, the pedagogical elements of the design are more intuitive than the conceptual theories therein. The fourth concern is one that is common in qualitative methods, which is the concern that a large amount of data will be collected while little gets reported, and thus some data is made inaccessible.

Perhaps the most important concern, particularly in regards to this study, is DBR's iteration feature. As mentioned above, one crucial component to DBR is the fact that the research design must be implemented and reworked a number of times until it is deemed to be effective. There is, however, no maximum number of times, yet there seems to be consensus that a particular design cannot be implemented only once for it to be considered DBR. This raised an important concern for this project given that it would only be implemented during one school semester. Indeed, as Herrington, McKenney, Reeves, and Oliver (2007) note, DBR, at first glance, may appear to be a research design that does not seem suitable for doctoral studies or research. Nevertheless, the authors provide a focused guide through the ways in which doctoral students can effectively adopt such a design. In their detailed description, the authors suggest a minimum of two iterations of a particular design done in a context, implying that it would take place over two semesters or years. For a study such as the one documented here, this presented a challenge given that the study was produced during one semester, though a number of iterations were produced. Notwithstanding, the question of what is meant by iterations should be considered. For instance, an iteration using the pedagogical framework was performed on one genre of digital literature, then reiterated on another genre of digital literature, followed by another, and then finally on the teaching of digital games. Thus multiple iterations using the pedagogical

framework was used throughout the four-week study were implemented to overcome this concern and slight modifications were made to the design each week. However, and as will be discussed in chapter five, this became rather difficult in praxis. Nevertheless, the primary goal of this study was, when implementing the pedagogical framework, to observe and document which literacies and concepts emerged each week, and then to modify the framework based on the data of each iteration. Though this was done, it is important to stress the limitations of the short timeline between each limitation and how that may have hindered the fidelity towards the DBR paradigm. Once again, this will be further expanded on in chapter five.

2. RESEARCH PARADIGM: QUALIATIVE AND QUANTITATIVE METHODS

For the project, a largely qualitative methodology was selected to fully capture the multiliterate practices performed by students during this pedagogical framework. A qualitative methodology was selected in order to best document, organically and holistically, the cognitive practices and sociocultural articulations of students in an English classroom within the Quebec college system. Such a view is informed by the characteristics of a qualitative methodology that attempts to report data using multiple perspectives, allows an identification of the main factors involved in a particular situation, especially from the participants' interpretation of the situation, and generally sketches a larger scenario that emerges (Creswell, 2014). An effective description of the importance of qualitative research to deeply understand phenomenon or contexts may best be summed up by Eisner (2001) who states that the "one-shot commando raid as a way to get the data and get out no longer seems attractive. You need to be there" (p. 137). Here, Eisner distinguishes between a quantitative methodology that can be characterized by a relative absence in the field on the part of the researcher, especially in relation to the participants, and a qualitative approach that favours longer contact with the participants. Moreover, qualitative methodology is,

as Keith Richards (2003) states, above all else a “person-centered enterprise and therefore particularly appropriate to our work in the field of language teaching” (p. 9), particularly in that it provides a more naturalistic data collection method to document context-specific behaviours and articulations (Bailey, 1996). Thus, to fully observe and document students’ multiliterate articulations with digital games and digital literature during the proposed pedagogical framework, while modifying such a framework to reflect these articulations in future iterations, a mostly qualitative methodology was deemed to be the most effective.

Indeed, using a qualitative methodology is not without precedent in digital game based language learning (Zheng, Wagner, Young & Brewer, 2009, Ryu 2011, Sylvén & Sundqvist, 2012; Yang & Chen, 2012). However, such previously documented research has used qualitative techniques principally through self-reporting (diary writing) and open-ended responses to questionnaires. Though effective, one may argue that the researcher needs to paint a more in-depth picture, documenting the utterances and practices that occur in the classroom when students are communicating with each other and thus negotiating meaning socially, through the varied social and institutional practices within the classroom. Students are not robots speaking on cue only when asked direct questions, but communicators and thus engaged in negotiating with each other. Therefore, procedures and techniques that are traditionally used within qualitative studies such as field and observation notes, focus groups, and more untraditional ones such as think-aloud screencast recordings, are being considered for this project (see below). That being said, brief surveys will be used during the study, to gather quantitative data such as socio-demographic information as well as qualitative data in the form of progress reports to efficiently detail ease of use and/or complications with the use of digital games and digital literature (see Appendix A). This process speaks to Howe’s (2012) discussion of conjunctive triangulation in

mixed-methods situations. In his article Howe explains the number of ways quantitative and qualitative methods are used to determine certain outcomes. In his discussion of conjunctive triangulation, Howe explains that “quantitative-experimental methods [...] are relegated to description and exploration and qualitative-interpretive methods [...] do the work of providing causal explanations” (Howe, 2012, p. 93). In other words, qualitative methods give the more in-depth explanatory power to quantitative ones, which give a broader, though less explanatory description. In relation to the project, surveys were used to provide a broader view of the students’ digital practices, for example, the classroom as a whole, and was later further expanded upon through focus group discussions and observations of groups of students. However, before the particular research design and specifics of each data collection technique for the proposed project are discussed, it would be beneficial to touch on the methodological perspective that was adopted during the project.

2.1. Ethnography

The qualitative paradigm selected for this research project is largely informed by ethnography. This study was informed by an ethnographic methodology, seeking to document and observe the particular sociocultural practices when using digital games and literature. Ethnography is one of many types of qualitative methods that have emerged in the social sciences over the last 50 years. Originating in anthropology, ethnography, in a very general sense, is the “art and science of describing a group or culture” (Fetterman, 1998, p. 1). Thus, sustained and meticulous detail of the daily habits of a group is key in ethnography. Indeed, the ethnographer is primarily concerned with the routine and/or daily lives of people where patterns of human thought and behaviour are the primary focus (p. 1). Similarly, Hammersley (2006) underlines how ethnography is a study at first hand, focusing on what people do and say in a particular

context. A similar viewpoint is shared by Honer (2004), who describes the ‘thick description’ predominant in ethnography as an access to the “knowledge and habitual behavior of the people under investigation” (Honer, 2004, p. 113).

In ethnographic studies, fieldwork is of utmost importance. On this point, Hammerlsey (2006) interrogates the extent to which researchers must commit lengthy amounts of time in the field with their participants, claiming that “social ethnographers focus on what happens in a particular work locale or social institution when it is in operation, so that in this sense their participant observation is part-time” (p. 4). Regardless of the amount of time spent, it is crucial that the researcher be present in the field for an ethnographic study. Indeed, being present to observe, to write what is seen and heard, asking multiple questions, whether seemingly naive or inconsequential, are crucial for the ethnographer. Fetterman (1998) highlights the importance of life histories and gathering information from multiple people, especially since one particular individual may provide valuable information (p. 9), thus emphasizing how luck can play a key role in ethnography, in essence suggesting that gathering as much data to draw the fullest picture is primordial.

Ethnography has had an important role in education research, and more importantly in language and literacy learning. New Literacy Scholars such as Heath (1982) and Street (2014) Street & Heath (2008) have published ethnographic studies within the classroom, often focusing on language and literacy development. Formal education settings are particularly ripe for the ethnographer in that they can reveal the norms and ideologies of groups in power that are supported within these normative settings, and can also open opportunities of inquiry about how “learning is displayed and valued in relation to different combinations of multimodalities” (Heath

& Street, 2008, p. 19). Indeed, as new ways of reading and writing evolved with technology, ethnographic research also evolved, for as Mills (2010) notes, the digital turn in New Literacy Studies has been “predominantly comprised of ethnographic research” (p. 248).

In so far as the written research document that is produced, Fetterman (1998) makes a distinction between ethnography and an ethnographically informed report. Discussing the two, Fetterman states that an ethnography attempts to be “holistic - covering as much territory as possible about a culture, subculture or program” whereas an ethnographically informed report typically has larger limitations in that it may be created under time and funding constraints (p. 11). In other words, ethnography attempts a much more pervasive approach to understanding a phenomenon within a given culture or society, while an ethnographically informed report uses ethnographic methods in a more limited scope, discussing a strata or sub-strata, in a particular context over a particular period of time, of a society or culture (Fetterman, 1998). Though limited, a detailed and committed involvement and observation is still necessary to understand the complexity of people’s beliefs, attitudes, and behaviours in an ethnographically informed report.

As some theorists have pointed out, the role of the researcher is also an important element in relation to ethnography and ethnographically informed studies. In this regard, Fetterman (1998), as well as Mills & Morton (2013), discuss the concept of the participant-observer; a dyad that is perhaps best understood as existing on a spectrum, with the role of participant on one end and the observer on the other. Depending on the tradition one identifies with, the researcher may believe it important to situate him or herself within the position of the participant, immersing themselves in the context and situation of the study (Mills & Morton, 2013, p. 53). This comes

from an anthropologically informed tradition, and does have its drawbacks, given that the researcher may concern themselves with too much focus on their immersion in the culture, rather than documenting and observing. However, it does highlight the importance of the researcher to respect, appreciate, and be acutely aware of the context of study. On the other end of the continuum is the objective observer who, though they are also attuned to the context of their study, is wary of in-depth participation. This position is typically derived from the educational ethnographers' tradition, one that looks upon participation as a "means to an observational end, rather than integral to the research strategy in itself" (p. 52). Mills & Morton thus recommend a middle ground where the researcher is able to observe and remain detached from their context, yet remain engaged enough to concern themselves with the participants' experience. For this study, participation was key in order to gain access to students' reactions, articulations, and actions in regards to the digital games and digital literature that they encounter. This was done with the goal of respecting the nature of an ethnographically informed study with a participant-observer position, while both observing and collaboratively participating with the students.

3. THE RESEARCHER'S ROLE AND COURSE CONTEXT

Though the extent to which I participated in the study has been alluded to above, the primary role of the researcher, as well as the context of the study, still needs to be addressed. For this study, the researcher was also the teacher of the course. The course was a 2nd year, college English course at an Anglophone CÉGEP in the Eastern Townships of Quebec, Canada. Despite being an Anglophone college, many of the students who attend the college identify themselves as French first language speakers. This element was pertinent to the second aforementioned objective, yet, as will be discussed below, explicit English second language teaching remains a complicated and controversial issue at a first language, Anglophone college.

More specifically, the study took place within one of the four compulsory English Language of Instruction and Literature courses at Champlain College – Lennoxville campus – entitled ‘Literary Themes: The Self via Technology’, which had 24 students enrolled. The course took place on Monday and Wednesday mornings from 8:30 a.m. - 10:30 a.m. The course’s main competency is that students, at the end of the course can demonstrate their ability to “Apply an analytical approach to a literary theme” (MELS, 2009, p.11). The specific elements of the competency are as follows: 1) Recognize the treatment of a theme within a literary text; 2) Situate a literary text within its cultural context; 3) Detect the value system inherent in a literary text; 4) Write an analysis on a literary theme; 5) Revise the work.

These competencies were activated and measured throughout the course, including the final four weeks during which the study took place. This course’s principle theme, evident in the title of the course ‘The Self via Technology’, examines technology’s role in meaning making and how it extends to conceptions of human identity. This theme was explored in various works (short stories, essays, film) leading up to the study, and continued through the study during the last four weeks of the course in which the focus shifted to digital, interactive texts. Thus, during the last four weeks, students discussed the ways in which digital literature and digital games treat particular themes, and the ways in which these themes differ (through interactivity, procedural rhetoric) with more traditional forms of texts (print, film). The elements of the competencies mentioned above were respected throughout the course, as well as during the study (the course outline is presented in Appendix B).

3.1. Weekly Plan of Study

The following section will present the weekly plan of the study. This demonstrates the content of each week and the steps of the pedagogical design that were implemented during each step. This overview of the study will be expanded upon in chapter four, but is presented here to give a general sense of the study's plan as well as the genre of texts that were covered.

3.1.1. *Week 1, Iteration 1: Interactive Fiction*

During the first week of the four-week module, the students were presented with the overview of the study. After the description of the research objectives, the sub-genre of digital literature known as interactive fiction was presented. Here students played two texts from this genre, *Lost Pig* (Jota, 2007) and *Galatea* (Short, 2000). Students were given time to play the texts followed by a class discussion of their impressions, as well as an analysis of the games. Similarities between the narrative point of view of the majority of interactive fiction (the second person point of view) and other texts in contemporary media (situated practice) that do and do not use this point of view were made. Students were taught how to interact with this text and were encouraged to negotiate with the text (overt instruction). During discussion sessions, students were asked to critique the games using the theory presented during the first class and they were asked how they would improve the gaming experience of the games (critical framing and transformed practice).

3.2.1. Week 2, Iteration 2: Hypertext Fiction

Moving from interactive fiction into more complex forms of digital literature, students were then introduced to hypertext fiction. During these classes, the students were presented with hypertext theory, relating the ways hypertext fiction function in relation to contemporary media (news websites, blogs, etc.) (Examples of situated practice). Furthermore, concepts such as multimodality were discussed as some hypertext fiction introduce sound and image (overt instruction). Students then played two works of hypertext fiction, *Surviving History: The Fever* (Ponce, 2014) and *Beneath Floes* (Snow, 2015). They were then encouraged to present a critique of the works (critical framing), allowing them to apply the terminology and theory seen previously. Finally, students individually created a hypertext narrative using the free software *Twine* (transformed practice).

3.3.1. Week 3, Iteration 3: Hypermedia Fiction and Digital Games

In the third week of the study, the students analysed works of hypermedia fiction and digital games. Hypermedia fiction is a genre of digital literature that includes flash animation and is conventionally similar to contemporary digital games. Students were also presented with digital game theory to prepare them for both their final essay and their final oral assessment in which they were to analyze their digital games (overt instruction and critical framing). Students played and presented a critique of contemporary works of hypermedia fiction (critical framing), allowing them to apply the terminology and theory seen previously. Finally, students suggested modified versions of hypermedia works, allowing them to narrativize certain discourses and themes within contemporary society (transformed practice).

3.4.1. Week 4, Iteration 4: Study Conclusion

The final week consisted only of one day, because one class was cancelled (as opposed to the normal schedule of two classes per week). Thus, the pedagogical design was not implemented this week, as no digital texts were analyzed. However, on the last day, one final focus group took place, which served as a discussion of the past four weeks. The data from this final focus group will be analyzed below in chapter four.

4. POPULATION AND SAMPLE

Given that the researcher conducted the study with participants from a course he was teaching, the sampling selection process was a non-random one. More specifically, the non-probabilistic sampling process employed was a purposive sampling procedure. Purposive sampling is often synonymous with qualitative research, particularly with studies that are concerned with how particular habits, behaviours and attitudes are formulated and “the role they play in dynamic processes within the organization or group” (Palys, 2008, p.697). Though purposive sampling eschews the importance of representativeness of the sample to the population, there are significant sociodemographic similarities of the college population to other colleges in Quebec, and the course content follows ministry guidelines. What is in fact crucial is that these students were enrolled in an English language arts course that included cultural texts, specifically literary ones, and also there were English second language learners enrolled in the course.

As for the sample size of the study, out of the 24 students enrolled in the course, 23 students participated in the study. The one student who elected not to participate took part in all

activities and exercises throughout the course, but asked that her evaluations and data not be collected and analyzed. As will be discussed below, there was one student who claimed not to have a home computer, and could therefore not complete the digital game walkthrough or an analysis of a digital game. She was thus given a comparable evaluation for both. She was to read a short story and write a brief reading log employing the literary terms seen previously in the course. Similarly, she wrote an essay, analyzing her short story. Evidently, her data for these last two evaluations were not analyzed for the purpose of the study.

5. DATA COLLECTION TECHNIQUES

As discussed above, New Literacy Studies scholars have demonstrated that traditional ways of ‘reading’ and ‘writing’ have evolved, particularly via technology. Thus, given that study’s participants were engaging in new ways of reading and writing within the study it was deemed appropriate that innovative techniques should also be reflected in the data collection process. For instance, data was collected using procedures that demonstrate the effects of integrating digital practices, such as think-aloud screencasts and game creation exercises (hypertext narrative creation), but also using traditional methods, such as focus groups or from the students’ produced artefacts, such as written essays. The intention of this research approach was to demonstrate the ways digital technology served not only as the medium under pedagogical scrutiny, but was also used as the medium and basis of data collection. The use of digital techniques and procedures also gestured toward the emerging field of digital ethnography. Pink, Horst, Postill, Hjorth, Lewis and Tacchi (2015) characterize digital ethnography by looking at the ways digital ethnographers’ contact with participants may be mediated through digital apparatuses (p. 3). Indeed, digital ethnography acknowledges new digital practices and integrates them into the documenting process, at times asking participants into their social media practices.

Despite the mediation, or perceived filter of digital technology, such an invitation can allow the researcher to be privy to the intimate practices and habits of their participants, for example the ways in which they engage on social media sites such as Facebook and Twitter. Given this opportunity, researchers must also be conscious of the intimate nature of some digital technologies and the habits and practices students perform when using them.

5.1. Think-Aloud Protocols

One way to access intimate student articulations is by using think-aloud protocols. Think-aloud protocols have been used in both L1 (Cho, 2014) and L2 research over the last thirty years (McKeown & Gentilucci, 2007). In L2 research, their primary purpose has been to assist second-language learners develop the ability to monitor their reading comprehension, but also to employ particular strategies to facilitate the understanding of written text (Baumann, Jones, & Seifert-Kessell, 1993). Such strategies can also allow students to self-regulate the reading process and improve comprehension by employing “fix-up strategies” where needed (Casanave, 1988). More importantly, think-aloud techniques also initiate metacognitive monitoring (Ward & Traweek, 1993) crucial in the improvement of second language learning (Carrell, Pharis & Liberto, 1989). Kucan and Beck (1997) note that think-aloud protocols can also demonstrate a shift in think-aloud research, for the way in which they may highlight the impact of social interaction in meaning making (p. 272) as opposed to only focusing on the metacognitive aspects of reading.

Indeed, studies that have used think-aloud protocols in the field of second and foreign language acquisition have tended to focus on the cognitive and linguistic implications (Cassanave 1988; Bereiter & Bird, 1985), rather than the sociocultural aspects of meaning construction. However, as Yayli (2010) points out in his study of cognitive and metacognitive strategies used

by EFL learners, implementing think-aloud protocols exhibits the contemporary turn in literacy education towards process orientation. Yayli cites Kern (2000) who claims that “reading and writing are always socially-embedded activities involving relationships, shared assumptions, and conventions as well as individual, personal acts involving imagination, creativity, and emotions” (as cited in Yayli, 2010, p. 111). Similarly, Tuyay, Jennings, and Dixon, (1995) emphasize the importance for speaking and the social negotiation of meaning making in a bilingual classroom setting, allowing students to contextualize knowledge and particular tasks. In other words, a multiliterate perspective that recognizes the sociocultural and contextual aspects of meaning making, but also leaves room for creativity, namely through the transformation of text into other texts (i.e. transformed practice), may provide an effective perspective on the ways students negotiate meaning through social interaction. Yet despite the seemingly putative possibilities of think-aloud strategies to provide a window into the meaning-making processes of second language students, there are some drawbacks and limitations. As Rankin (1988) argues, participants performing think-aloud tasks may be influenced by what they believe the researcher ‘wants’ them to do and say (p. 121). It is possible that students may feel that they must report certain strategies and may simply be regurgitating vocabulary and terms that were discussed in the class to please the teacher or researcher. This was a point of concern for this study particularly since the students had some instruction in regards to concepts such as persuasive rhetoric and literary gaming in relation to digital games and digital literature. Thus, there was a fear that while the students were playing and reading their digital texts, they were simply repeating terms that were taught throughout the course. However, it was inevitable that the application of these terms and the appropriateness of their use that were analyzed and thus, determined whether the participants had fully grasped the concepts presented.

5.2. Screencasts

One way to avoid the influence of a researcher-observer on think-aloud procedures is to have the students conduct the think-aloud activities alone. This may appear counter-intuitive, as think-aloud protocols regularly employ a researcher or observer to document the participants' think-aloud enunciations, as well as being present to guide them with questions. For this study, screencast technology was used in order to record the enunciations of the participants as they played their digital games. It video recorded what the students saw or did when they were reading/playing. One of the reasons for this was to avoid the distractive aspect of a researcher questioning students as they are in the process of reading and playing their game, especially given that they might not be at ease being watched or questioned during gameplay, and particularly as such questioning may interfere with their processes (Tan, Leong & Shen, 2014). Another reason is the metacognitive benefits think aloud protocols provide, such as the positive learning benefits (Bannert & Mengelkamp, 2008), and how it may function as a glimpse into the personal knowledge construction process (Hofer, 2004).

Screencast technology does have a precedent, though only recently, in second language environments. Scholars such as Seror (2013) have demonstrated the writing strategies students employ while working in digital spaces thanks to using screencast technology which, he claims, offers an effective, real-time visual record of the multiple events involved as students learn to read, or write, with digital texts (p. 10). Thus, digital screencasts served as one of the various digital ethnographic practices used in this project. Students recorded these think-aloud screencast walkthroughs (a walkthrough is a video demonstration of someone walking through the steps of a game) using the free screencast technology software called *Screencast-o-matic*. This application

was downloaded and used on their home computers. Students were provided with a list of open-ended questions that they were to refer and respond to at various times during their walkthrough. This walkthrough was also part of an evaluation (5% each, one for their digital game, one for their hypertext narrative) that had been approved by the coordinators of the English department. The details of the evaluation are provided in Appendix C. These walkthroughs were analyzed and coded thematically based on multiliterate articulations uttered, as well as points of convergence that gesture towards gaming concepts (procedural rhetoric, literary gaming) and learning theories, particularly, for the latter, in the field of second language acquisition.

5.3. Classroom Artefacts

Cultural artefacts can have significant and meaningful power for an ethnographically informed, DBR study. Some theorists, like Fetterman (1998), posit the importance of classroom materials as an effective data source in ethnographic studies (p. 59). Indeed, everyday materials used in a classroom can assist in giving meaning to the reading, writing, and meaning-making practices occurring during the study. Thus, it was of interest to this study to collect artefacts produced by the students to demonstrate possible articulations of multiliterate comprehension. Such a perspective is inspired by research, such as the work done by Lemke (2000), who discuss the role and use of artefacts and their social, semiotic mediation, as well as the work done by Pahl (2004), who similarly looks at the use of artefacts as mediation, yet within multilingual contexts. These authors demonstrate the importance of artefacts as a composite signifier of a variety of sociocultural realities and practices. Thus, not only were the artefacts chosen in this study used to exhibit the multiliterate practices articulated by the students, but an awareness of their complex meaning-making possibilities (the cultural, symbolic and semiotic negotiations of meaning

created by the students with these artefacts) helped inform how the artefacts themselves are culturally situated texts.

To accommodate the use of cultural artefacts as data collection tools, the students were asked to produce digital narratives that allowed them to apply, via narrative, concepts, themes, and discourses. The purpose of this was manifold. First, such an activity allowed students to articulate aspects of multiliterate practices via transformed practice through the integration of, for example, procedural rhetoric within their created narratives. Second, it allowed the researcher (and teacher) to see the extent to which the students had fully integrated an understanding of said concepts and terms relevant to both the study and course objectives. Thus, students used the free hypertext narrative *Twine* to create a digital, hypertext narrative that allowed them to apply some of the literary, as well as gaming concepts, demonstrated during the course. After the narrative was completed, the students created a screencast walkthrough, explaining their narrative. These narratives were part of an evaluation (details in Appendix C) that had also been approved by the coordinators of the English department. These hypertext narrative walkthroughs were analyzed and thematically coded based on the multiliterate articulations, as well as possible points of convergence between digital literature concepts and theories in the field of second language acquisition, such as sociocultural language learning and communicative language teaching. In addition to the narrative walkthroughs, students' essays were analyzed, for multiliterate articulations and the application of terms and concepts relating to digital games and digital literature.

5.4. Focus Groups

Given that the screencasts and other classroom artefacts such as student essays gave mostly individual accounts of the students' articulation of multiliteracy development, data was also gathered at the group level. In other words, ways in which meaning making was established and negotiated through social processes and the sociocultural aspects of multiliterate practices and articulations were anticipated for this study. Thus, focus groups were implemented to facilitate the collection of data that could reveal how students articulate certain elements of multiliteracies, while among peers and within group settings. However, this was not a group interview. The distinction is a significant one in that in focus groups, the students can create and negotiate answers and meaning amongst themselves. This is an important element that underlines the sociocultural aspect of meaning making given that the researcher is more of a facilitator or moderator, whereas in a group interview, it is the researcher who takes the lead role asking the group specific questions to which the group collectively answer (Thomas, 2010). The more passive, yet observant role of the focus group researcher is similar to the role of the ethnographer while documenting notes in the field in that he or she observes and is more of a facilitator and mediator. At the end of the playing and discussion of each genre of digital text (see list of each genre above), focus groups were conducted with the students outside of class time and only during students' availability and with their consent (consent form is provided in Appendix D). A list of the guiding questions that were used during each focus group is included in Appendix E. Focus groups lasted approximately 20-30 minutes and were recorded. They were then immediately transcribed and analyzed, using a thematic coding process to identify articulations of multiliteracy development, as well as points of convergence with second language acquisition theory.

5.5. Field Notes

Field, or observation notes have been a traditional technique used by ethnographers for many years. As Fetterman (1998) states, they are the “brick and mortar of the ethnographic edifice” (p. 114). While in the field, ethnographers will observe and describe what they see, experience, and document how the participants react and/or what they enunciate through their usual habits and processes. However, the researcher must be sensitive and conscious of their role when taking field and observation notes, in trying to be as respectful as possible while still capturing enough information to be useful and effective for the study. These issues have import for a project that attempts to document the ways students react, particularly when they are conversing and exchanging with their fellow students in the classroom. Thus, particular attention was taken so that students could feel comfortable and natural in their environment. Given that some students are second language learners, issues of comfort and anxiety are significant, as some students may feel nervous about participating and speaking another language (MacIntyre, 2002), regardless of how advanced they are. Therefore, such factors have particular implications for documenting field notes in such a context, in that the researcher must be careful of not making the students feel self-conscious of what they say and do and therefore not hinder the data collection process.

Field notes were taken while the students were discussing each digital literature text and game amongst themselves. These notes were also taken during interstitial moments of the course (i.e. during breaks and other group discussion times) to record any reactions in reference to the digital literature and games provided during the course. Moreover, the teacher took personal field

notes, in the form of a work diary after each week, documenting the elements that emerged in so far as the instruction as each text and points of improvement to the design iteration.

5.6. Surveys

Though most of the techniques above demonstrated a mostly qualitative methodology, in the interest of collecting a rich amount of data, minor quantitative data collection techniques were deemed to be effective in demonstrating, pragmatically, the efficacy of this pedagogical framework of digital games and literature. This was done by providing brief 3-5 question surveys before and after the four-week study. The results of these surveys gave a larger view of the ways in which the students negotiated meaning and terminology in class through these texts, and possible difficulties that had arisen. These surveys were sent to all students at the beginning and end of the study. The first survey gathered mostly socio-demographic information, as well as perceptions of digital literature and digital games. The second survey focused on their experience playing and reading digital literature and digital games, particularly in regards to the level of difficulty and pedagogical elements taught throughout. The questions from both surveys are provided in Appendix A.

6. ANALYSIS OF DATA

The data analysis began with reviewing all the data collected each week (field notes, focus group discussions, student artefacts) and thematically coding them. Regarding thematic coding, Paillé and Mucchielli's (2013) discussion of qualitative analysis in the social sciences was particularly useful, especially in relation to their definition of a thematic analysis. For Paillé and Mucchielli, thematic coding consists of “procéder systématiquement au repérage, au regroupement et, subsidiairement, à l'examen discursive des thèmes abordés dans un corpus,

qu'il s'agisse d'une transcription d'entretiens, d'un document organisationnel ou de notes d'observation²⁵" (p. 232). Such a systematic assemblage of data was essential for this study given that, as the authors mention, the objective was to collect much data from multiple sources. Thus, a thematic analysis was employed that highlighted pertinent themes, largely informed by particular literacies, concepts in second language acquisition, as well as game studies (discussed in chapter two) that were articulated by the students. However, as will be detailed in the preceding chapter, other themes, concepts, and aspects that had not been anticipated, yet emerged during the study, were also retained.

Moreover, this thematic analysis focused on both the process involved during the different steps of the pedagogical framework and the ways in which students reacted through this particular section of the course. It would be worthwhile to discuss the word *articulate*, as this term has been mentioned and relates to the data analysis procedure. The word *articulate* is a word that denotes the spoken or written comments made by students, but also connotes the gestures and ways of acting and reacting in a classroom. Thus, multiliteracy articulations also related to the ways the various steps were implemented. For instance, the teaching during one of the four steps, that situated practice, was documented on the basis of field notes, students reactions (field notes, focus groups), and also the ways students specifically articulated, through the vocal, written, or gestural modes, other elements of multiliteracies. For example, if they spoke about their own digital practices (situated practice), and demonstrated difficulty or reluctance to gather information from a forum (information/digital literacy), the data was placed under the heading *Situated Practice*, with a subheading *Information/Digital Literacy*. Therefore, the ways in which

²⁵ Translation: "proceed systematically in identifying, grouping and, subsequently, examining the discursive themes covered in a corpus, whether it be a transcript of interviews, an organizational document or observation notes"

multiliterate articulations were documented and then coded followed a grid made of each step in the pedagogical framework, as well as the literacies and concepts mentioned in the preceding section and detailed in the associated table (Appendix F).

7. TRIANGULATION

Of utmost importance when analyzing data in both DBR studies, as well as ethnographically informed studies, is the point of triangulation. Fetterman (1998) defines triangulation as the comparison of information sources “to test the quality of the information (and the person sharing it), to understand more completely the part an actor plays in the social drama, and ultimately to put the whole situation into perspective” (p. 93). Similarly, Stake (1995) discusses the importance of triangulation as a tool of validity, stating that triangulation protocols are used “to increase credence in the interpretation, [and] to demonstrate commonality of an assertion” (p. 112). Indeed, triangulation is an effective tool to temper the subjective bent that is inherent in qualitative research, thus allowing for a closer approximation to ‘truth’. Given that this project will include data collected through a multiple number of techniques and procedures, a triangulation of data is essential for this type of project. By analyzing the various data sets provided, it was possible to compare, contrast and contest themes that emerge through the analysis. For instance, data collected during the focus groups were triangulated with student surveys, and/or triangulated with field notes, and/or triangulated with what students enunciated during their screencasts. Moreover, participants may also be considered as sources of triangulation, for as mentioned above, DBR studies attempt to erase the barriers between researchers and participants, often erected in other educational research studies. However, because of the time constraints of analyzing some of the data between each week (thus each iteration) more collaborative work between researcher and participants were not conducted.

8. ETHICS

Ethics certificates were obtained from both Champlain Regional College and Université de Sherbrooke. However, as a result of the ethics request, the Université de Sherbrooke outlined 3 significant concerns that will be addressed here:

1) The impossibility of guaranteeing the free consent of the students

Students were required to take the course, which contains content and evaluation measures approved by the CÉGEP. They were free to accept or refuse to take the pre/post survey, as well as participate in the focus groups, and were also free to refuse that their classroom artefacts (essays, screencast evaluations, hypertext narratives, etc.) be used for the study. Thus, the acceptance of the course plan by the students and the English department could be said to have effectively cancelled the need for consent participation in the actual course activities. That being said, students were clearly explained that being enrolled in the course did not necessitate that they participate in the study and if any student absented from the study and were concerned about their grades, they were able to ask for a grade review to ensure that they receive fair and equitable treatment. What was crucial was the need for consent so that I could collect observational data from activities and work carried out by the students. It is on this point that the researcher must obtain consent; and the letter of consent takes these two aspects into account (Appendix D). Because one student refused, I agreed to disregard the student's actions in her observations and not to integrate her work into the data to be analyzed. Thus, the concern that the proposed protocol prevents the free consent of students was recognized and addressed.

2) The fragility of the scientific integrity of the research process;

The nature of the research (exploratory, descriptive type of a rarely documented phenomenon) requires the involvement of the researcher in the collection of data, particularly with regard to observations of practices. Closer to ethnography than to action research, DBR does not aim to evaluate a prototype but to describe phenomena that can be observed from a complex theory applied to the design of small learning designs (objective 1) and analysis of design mechanics in the light of field data (objective 2).

Because of the recommendations of the ethics committee regarding the fragility of the scientific process of research, it was possible to have the raw data analyzed by a multiliteracy expert, Nathalie Lacelle, co-director of the research project. This made it possible not only to enrich the analyses of the data, but also to validate/invalidate the objectivity of the teacher-researcher's analysis.

3) Evidence of a conflict of interest regarding the triple role inherent in this type of design;

In this case, my role is similar to that of the researcher-participant, but it does not allow one to abolish the hierarchy established between the teacher (evaluator) and student (linked to the course contract). However, it was felt that the pursuit of the research objectives outlined could only be achieved by a teacher-researcher-participant because of the methodological choices. In addition, the openness of Champlain College to the experimentation of new pedagogical designs within the framework of the course was, again, an essential condition for carrying out this research. Finally, given the research objectives (which were intended to document observation

and analysis of the data collected, not the evaluation of a prototype or its effect on learning), the addition of a stage of analysis of the data by an expert in the field of multiliteracies, insured the absence of conflict of interest and the scientific rigor expected from doctoral research.

9. CONCLUSION

As detailed above, the methodological considerations the project were considerable. Combining DBR with ethnographically informed approaches was in many ways difficult while attempting to respect the qualities and limitations of both DBR and ethnographic techniques. However, and as detailed above, DBR seemed the most appropriate design for a project that introduced a complex pedagogical framework informed by digital games, digital literature, and L2 theory. Like other research in multiliteracy development (Street & Heath, 2008), the project was ethnographically informed to best capture the ways of acting, reading and writing with digital texts, in the classroom, yet all the while taking into consideration out of classroom practices and influences (Howell & Reinking, 2014). Given that the project relied on the technological equipment of the school, as well as the students' personal access to and familiarity with technology, issues surrounding the implementation and integration of these into the classroom and pedagogy were considered. Nevertheless, many of these issues were addressed and will be discussed below.

CHAPTER FOUR: DATA ANALYSIS

The following chapter will detail the data that was collected and analyzed during the implementation of the four-week study. To begin, a brief summary of the data collected will be presented, followed by the results of the pre-study survey that was administered to document some of the students' digital game playing habits and how they self-identify linguistically. Next, data from each week of the four week module will be introduced, beginning with observation notes which will serve as an overview of what was done in class that week followed by a figure that will illustrate the literacies and concepts articulated. Following this, each pedagogical step (situated practice, overt instruction, critical framing, and transformed practice) will be presented along with the pertinent student articulations of multiliteracies in relation to each of these four steps, including other themes or literacies that emerged and were not anticipated before the study. Lastly a presentation of possible modifications that were considered after each week for the following week's iteration of the research design will be presented, including a figure that demonstrates the pedagogical issues that arose during the first week and improvements that were considered for future iterations. The chapter will then conclude with the results of the post-study survey, which was used to document the students' experiences with the digital games and works of digital literature used during the study.

1. SUMMARY OF DATA COLLECTED

As mentioned in chapter three, a wide variety of data was collected throughout the study. First, two surveys were conducted, one before the study (N=21) and one at the end (N=10). Three focus groups were conducted and recorded (approximately 20 minutes each) at the end of each week of the study. These focus groups were comprised of three students per group. Students'

hypertext fiction walkthroughs (23 of them), digital game walkthroughs (22), and the students' final essays (22) were also collected. Finally, observation notes and formative evaluations (such as discussion groups responses) for each class were also collected.

2. PRE-STUDY SURVEY

As discussed in chapter three, the pre-study survey was created to gather socio-demographic information as well as to document the students' familiarity with, and interest in, digital literature and digital games so as to be able to compare the results with the survey in terms of their attitudes and perceptions towards the teaching of digital games and digital literature. Moreover, the data used from the survey was triangulated, where appropriate, with other forms of data (focus groups, screencast walkthroughs, etc.) collected throughout the study. It is extremely important to note that, given the small sample size, the survey data in no way is generalizable; it is to assist in describing this group and, once again, to complement other sources of data.

Thus, the survey was administered to the students to get a sense of how they self-identify on a linguistic level, which informed the goal of the second general objective in regards to second language acquisition. The survey also served to provide background information on their digital game-playing habits, their familiarity with digital games and/or digital literature, and their expectations of these types of texts, all of which served to partially inform the second specific objective, which was to understand students' established digital reading/playing practices and the ones activated during the course.

21 out of the 24 students enrolled in the course completed the survey (two students were absent and one student did not want to participate in the study at all and was thus exempt from

having to complete the survey). Below are the analyses of the survey results. It is important to note that given the small number of students enrolled in the course and participating in the survey, generalizations can not, and should not, be made. Moreover, the percentages depicted should be considered with this view in mind.

2.1. Linguistic self-identification

Considering that one of the objectives of this study is to document the ways in which L2 learning theories overlap with aspects of the pedagogical design, it was deemed important to get a sense of how students self-identify in terms of language. Thus, question 1 asked: How do you self-identify (in terms of language)? Responses to this question were not surprising considering recent news in Quebec about how many Francophones attend Anglophone colleges to improve their English (Méloche-Holubowski, 2016). 15 out of 21 students self-identified as Francophones, whereas 6 out of 21 self-identified as Anglophones. It is possible that some students might have identified as ‘bilingual’ rather than being slotted into this, admittedly, problematic binary. Unfortunately, a third option that would have allowed students to self-identify as bilingual, and not necessarily French first language nor English first language speaker, was not considered at the time of the survey’s creation.

Table 1
How do you self-identify (in terms of language)?

Linguistic Community	N	%
Anglophone	6	28.57
Francophone	15	71.43
Total	21	100

2.2. Frequency of Digital Game Play

In order to get a sense of the students' digital game-playing habits, the question 'How often do you play digital games?' was asked. Seven out of 21 students said never, 1 student said once every six months, six students once every month, two students chose once every week, and five students claimed they played more than once a week. During the administration of the survey, one student asked if puzzle games that are frequently played on a handheld device such as *Candy Crush* could be considered a digital game. I responded in the affirmative, not wanting to exclude certain types of games. However, it may have been preferable to specify games that are played on a console or laptop/desktop computer, as these relate more to the games used in the study. However, even this distinction is fraught given that some of the digital games that were included in this study (for instance *The Walking Dead*) are available via smartphones and tablets. That being said, the question's purpose was to get a sense of their digital game-playing habits in regards to playing frequency, rather than whether they play specific types of games such as the ones used in this study. Interestingly, this data differs from recent studies of game playing habits in North America. For instance, the Entertainment Software Association of Canada (2010) revealed that 30% of Canadians play every day, 45% a few days per week, 15% once a week, 5% once every 2 weeks, and 6% once in the past 4 weeks (p.15). Whereas, as per the survey, 23.81% of students claimed to play digital games more than once a week, 9.52% claimed to play once a week, 28.57% once every month, 4.76% once every six months, and 33.33% stated never (Table 2). A more recent, though broader study, showed that overall, 37% of Canadians define themselves as a gamer (Entertainment Software Association of Canada, 2016, p.4). Somewhat closer to the students' responses, a survey conducted by Common Sense Media (2015) in the United States published a report that found roughly a quarter (an average of 27%) of teens play

console digital games on any given day (p.10). It is worth noting, however, that in this last study, they are referring to consoles, and that if handheld devices were included in their study, the numbers may have been higher. Nevertheless, the difference in this group's responses in relation to the above studies is significant and provides possible implications as will be discussed below.

Table 2
How often do you play digital games?

Answer Choices	N	%
Never	7	33.33
Once every six months	1	4.76
Once every month	6	28.57
Once a week	2	9.52
More than once a week	5	23.81
Total	21	100

2.3. Familiarity with Digital Literature

The question 'Before this course, had you heard of digital literature?' was included to gather a sense of students' familiarity with this little known genre of literature. Surprisingly, six students agreed with this question, while 15 students said they had not. It is surprising that six students claim to have heard of digital literature before, as it has been my brief experience teaching this genre of literature that students seems to be unaware of this genre of literature. Though one student had taken a course previously in which students analyzed some works of digital literature, it is unclear whether the five other students were thinking of literary works that were available via digital apparatuses (e.g. e-books), versus works of digital literature that conform to the definition detailed in chapter one (Hayles, 2007). The definition had not been provided to the students previously, yet perhaps should have been as this may have modified the

response. This is another element that should have been clarified during the administration of the survey and could better assist in understanding their digital practices as per objective 1. 2.

Table 3
Before this course, had you ever heard of digital literature?

Answer Choices	N	%
Yes	6	28.57
No	15	71.43
Not Sure	0	0
Total	21	100

2.4. Level of interest to play/read

The question ‘Please indicate your level of interest to play/read the following:’ (Table 4) was split into two sub-categories where students had to indicate their interest in digital games and digital literature. In the case of the former, six students indicated that they were very interested, seven students were somewhat interested, four students were neutral, two students were not very interested, and two students were not at all interested. In the case of digital literature, five students were very interested, five students were somewhat interested, seven students were neutral, four students were not very interested, no students were not at all interested. It is intriguing to note that two students were not at all interested in digital games, yet these two students apparently did not check the same box for digital literature. It might be the case that these students did not see the pertinence of digital games in a literature course, whereas digital literature may have seemed more pertinent to them. Regardless, not enough information is provided in responses to determine their perceptions of the genre’s pertinence. As for the ten students who were somewhat or very interested, this aligns with research on digital games being

a source of motivation (Birk, Atkins, Bowrey & Mandryk, 2016; Yang, 2012) and demonstrates that it can serve as a gateway to interest students in the literary elements of a text.

Table 4
Please indicate your level of interest to play/read the following:

Genre	Very interested	Somewhat interested	Neutral	Not very interested	Not at all interested	Total
Digital literature	23.81%	23.81%	33.33%	19.05%	0.00%	
N	5	5	7	4	0	21
Digital games	28.57%	33.33%	19.05%	9.52%	9.52%	
N	6	7	4	2	2	21

2.5. Analysis of Pre-Study Survey

Overall, the results were quite informative, particularly in relation to how they linguistically self-identified, as well as their frequency and level of interest in digital games and digital literature. Indeed, as mentioned above, despite being an Anglophone college, the majority of the students enrolled in the class self-identified as Francophones. The importance of a majority in the class that self-identify as Francophones in an Anglophone college course was important in regards to the second objective, especially in the ways in which these texts may assist implicit second language learning²⁶. Although the precise levels of English language knowledge and competence of the participating Francophone students were not measured, the overall range of language competence was low to high intermediate level. The main reason that students' knowledge of the English language was not measured in classes such as this one is that these are

²⁶ Despite the fact that these students self-identify as Francophones, they may still be able to perform at native-like, English language-level competency. In other words, identifying as Francophones does not necessarily mean that they are ESL learners, but it is also quite possible that they could be. I think that you need to change this footnote. See my comment above.

not classes to learn the language. There is a presumption that students who attend English colleges have already mastered the language, although in reality, it is not always the case.

Furthermore, the pre-study survey results also detail the familiarity of the students with these types of texts and thus informed their experience with digital interactive texts (either digital games or digital literature), while providing information which assisted in understanding their digital practices and perceptions of digital games (i.e. frequency of play, familiarity with digital literature, etc.). Also, as mentioned above, these results appear to differ from data previously published, as mentioned above. Finally, the above data was triangulated below in relation to other forms of data (focus groups, screencast walkthroughs, observation notes, etc.) to demonstrate convergence and possible causality between data sets.

3. PRESENTATION OF WEEKLY FINDINGS

As mentioned in chapter three, the study occurred over a four-week period, featuring three genres of digital literature (interactive fiction, hypertext fiction, and hypermedia fiction) and digital games. Each week consisted of two class meetings with the students except for week four in which one class was cancelled. Class meetings lasted two hours (the prescribed class time). During these courses, students are expected to attend, have done the day's readings (if applicable) and provide analysis of such readings. Their analysis could be shared through class discussions or individual assignments.

For the presentation of each of the following weeks, each day's observation and field notes will be presented, as they will serve as a general overview of what occurred during each class. Following that, details on what data was collected and how it was analysed will be briefly

mentioned, followed by a figure outlining each literacy and/or concept under each step. Given that one of the study's objectives is to implement a pedagogical framework and research design, each step of the four-pronged pedagogical framework and design (situated practice, overt instruction, critical framing, transformed practice) will be explicitly discussed, elaborating upon the students' articulation of the pertinent literacies as well as the pertinent concepts/themes that were articulated during those pedagogical steps. This will be done in order to clarify exactly what literacies were articulated during each step.

3.1: First Iteration: Week 1 - Interactive Fiction

3.1.1. Day 1: Observation/Field Notes

The study began on a Monday in the computer lab. English classes at Champlain College are not typically taught in a computer lab, but in a classroom. However, to accommodate this study, each class took place in the computer lab, which is a room with three long tables in which there are computers and chairs for approximately 30 students.

At the beginning of class the students were presented with a brief introduction of the four-week module and given a description of the study. The students were then provided with the consent forms for the study followed by a lesson on the basic terms used when analyzing digital literature and games. Students appeared to be attentive and diligently wrote down notes on the terms, though this may be because I mentioned that some of the terms would be on the next quiz. It is also worth mentioning that though my experience with students having computer monitors in front of them tends to distract them, in that they often pay little attention to my instruction and instead visit websites, that day this was not the case; they paid attention as I lectured, and were

not looking at their monitors. However, as will be discussed briefly below, their behaviour did change later in the study. This change in behaviour highlights one of the added difficulties of having technology in the classroom, particularly in terms of how it affects classroom management. In the college context, much like other levels of education, students are meant to pay attention to the instructor when he or she is presenting material. However, when technology is introduced into the classroom, it can often be the cause of disruption as students may go online and look at websites and not paying attention, a pertinent issue that has been documented by some scholars (Sana, Weston, & Cepeda, 2013; Yunus, Nordin, Salehi, Sun, & Embi, 2013). The paradox here is that on one hand, having computers in front of students allows them to have access to information and applications to assist them in developing particular literacies (digital, information, media, etc.), yet it also opens up issues around classroom management and highlights issues around the sociocultural norms for classroom behaviour (in so far as knowing what is appropriate/inappropriate in a classroom environment).

After introducing the concept and terms, the students were presented with a list of games (see Appendix G) that they were to choose for their individual game analysis and subsequent evaluations (see Appendix C for descriptions of Screencast Walkthroughs, Appendix H for Infographic Poster, and Appendix I for Final Essay evaluations). Overall, most students seemed enthusiastic at seeing the list of games, and many were smiling and eagerly nodding their heads as they looked at their choices. However, there were three students who appeared irritated in that they were frowning and sighing vocally; one student claimed that she had an ASUS computer and insisted that she would not be able to play the games²⁷. She did not realize, however, that an ASUS computer is a PC computer. These three students also asked if they actually had to buy

²⁷ ASUS is a PC computer comparable to a Dell or Lenovo.

their game, followed by looks of disappointment when they realized that indeed they did. One student mentioned that it was a bit difficult for her financially to purchase a game. I sympathized with that position, yet asked her if it would be different if she had to purchase a book, such as a novel for the course (given that the price was similar), which is a common requirement for a literature course. She seemed to recognize that the game was necessary for the course, as a book or novel would be, and did not seem as upset or annoyed about purchasing it after my explanation. The fact that a student had this reaction is important, and I believe significant, along with the three other students' reactions, considering that it highlights the common generalization about students and their eagerness to play digital games in class. Such a generalization, however, is not unfounded when one considers the statistics cited in the survey results above, those that claim a majority of students play digital games more than once a week. Thus, my group's reaction is worthwhile to consider and to temper any assumption that students will jump at the chance to play digital games for their classes.

It is often assumed that including interactive media such as digital games in the classroom will inevitably engage all students; however this is not always the case. The above students' reaction, as well as my own anecdotal experience using digital games in the classroom, is that more often than not students are surprisingly reluctant to play games in academic contexts. Indeed, as some studies have demonstrated, the assumption that students are one "homogenous group of game consumers" (Bourgonjon, Valcke, Soetaert, & Schellens, 2010, p.1152) is problematic and does not reflect reality. A number of reasons can account for students' reluctance to play digital games, such as the negative social perception of digital games (violent, misogynistic, etc.), or digital games' educational, or in this case, literary (or narratological) merit, which is not immediately evident to students. Despite the fact that it was mentioned that they

would be choosing from a number of literary digital games it would also have been worthwhile to explain to the students that these games are cultural texts that are more considered and meditative, versus games that are more simplistic and gratuitous as violent and misogynistic games tend to be.

It is also worth noting that all the students were told at the beginning of the semester that they would be asked to purchase a digital game for the course. And that if any student did not have a home computer to play digital games, they would be provided with a film or a short story to analyze and would thus be exempt from that part of the study, but would continue with the rest of the course content (the digital games chosen during this class were to be played on their own time, not during class time). All of the students except two accepted to purchase their game (one who chose not to do the study at all and one who claimed she was unable to purchase a game because she did not have a home computer, but she nevertheless wanted to participate in the portion of the study that did not include the digital game analysis, such as the Final Essay and Screencast Walkthrough of their game).

Part of this first day's purpose was to give them an overview and explanation of the study, to present the consent forms, and to introduce them to this new module (digital literature and games) of the course. I had also decided to have the students watch a television episode that I felt would serve as an excellent bridge for this new module. The episode was 'Playtest' from the third season of the Netflix science fiction show *Black Mirror*. I felt that this would serve as an effective transition considering that, weeks before, in a previous module, we had watched a film (*Her*) and a television episode (*Mr. Robot*) that featured 'technology via the self' (the principal theme of the course). As mentioned above in chapter two, it was primordial during the initial

phase of the framework that the classroom represent a place that contextualizes, and reflects, real-world consumption and use of digital, multimodal texts, so that relevant situated learning and meaning making can be facilitated. Also, it was my belief that the episode of *Black Mirror* would allow them to consider the ways in which digital games have become an effective example of storytelling and could perhaps minimize some students' doubts about the validity of digital games as literature. Moreover, some of the topics and terms in this episode (player control, ethics in games, the power of digital game companies) could serve as points of analysis in the digital games they were to choose. And though this was not an essential element of the research study, nor the pedagogical design, I wanted to use it as a bridge into the module.

I had planned on ending the class by having the students watch the episode and then discuss it at the beginning of next class. However, the viewing apparatus did not work in the computer lab, and thus we could not watch it and did not watch it the following class as there was not enough time. Instead, we looked at a previous assignment the students had completed the week before. I also gave them more time to choose their game (allowing them to watch the various game trailers) after which I ended the course.

Overall, I was anxious about this first class because I was concerned about starting the study judiciously, making sure all the appropriate framing material was covered, and making sure the students were well informed about the gaming elements. The fact that I had difficulties with the viewing apparatus was frustrating, especially since I felt that the topic and theme of the episode fit perfectly with the module, and that watching the show would allow students to see the ways in which digital games can offer an interactive narrative. More importantly, the frustration with technology revealed an important issue for this, and future studies. Given that technology

played such an important role in this module and study, one must not ignore the ways it can also make pedagogy problematic when it does not function as planned. Concerns around the use of technology is not a new issue, and being adequately prepared and informed on how to integrate it is indeed crucial (Borko, Whitcomb, & Liston, 2009). Again, another element that should have been considered is the fact that some students appeared disappointed about having to analyse digital games. Though this was surprising, it was extremely informative for a study of this nature, as was discussed above.

3.2.1. Day 2: Observation/Field Notes

The second day of that week proved to be a much more productive meeting than the first one. Despite the fact that only 19 students showed up, the students that did attend answered questions more actively than on the first day of the week. I discussed an important aspect of the study, stating that: “Cheating is not only accepted when playing digital games and literature, it is often expected”. I explained to the students that one element that is important in digital games and digital literature is the necessity to view walkthroughs, read forums, and seek out information about the game or digital literature piece when arriving at a difficult part. Clearly, my claim that “cheating was expected” was a slight exaggeration, but my purpose was to promote the idea that they search online and not simply stay stuck at a difficult part. Moreover, I wanted this to function as a primer for them to possibly enact elements of information literacy. However, as Consalvo (2007) states, cheating is a significant, and complex, part of gaming. In her text, Consalvo addresses the ambiguity around this term, with cheating practices ranging from players “going beyond the instruction manual to friends, strategy guides, and gaming magazines for hints or walkthroughs”, to “the use of cheat codes that when entered into a controller or keyboard, produce a certain (beneficial) effect, such as a complete restoration of health, unlimited

ammunition, or more powerful methods” (p.85). Thus, cheating may best be considered as a spectrum within different degrees of dishonest behaviour. In the study, particularly in the first week, I used the term to mean the use of walkthroughs, hints, forums, and other sites that can provide answers for difficult situations, which again, may have allowed them to negotiate issues around information literacy. However, this will be further discussed in chapter five.

Following the introduction, I gave a brief description of interactive fiction, a genre of literature that is text-based and lacks images. In this genre, the reader/player must type basic action verb commands for the narrative to proceed. After this description, I invited them to start the interactive fiction text *Lost Pig* (Jota, 2007). In this game, readers take on the persona of an orc named Grunk who has lost a pig and must retrieve it. It is a comical game in which Grunk responds with broken English. For example, Grunk discovers what a curtain is: “Look like big rug, but it on wall instead of floor, so that make it curtain instead”. Unlike many other interactive fiction texts, (such as *Galatea* which will be discussed later), *Lost Pig* uses humour within its narrative and I felt that this might serve as an effective entry point into the genre, emphasizing the fun or ludic possibilities of these narratives. In some ways, the broken English featured in such a text can be problematic for L2 language learners given that their exposure to it may incite them to produce those same errors. However, I acknowledged the broken English used in the text, warning the students that Grunk uses incorrect grammatical and syntactical structures. Though this was not done during the study, an interesting activity might have been to correct Grunk’s errors in class and discuss the ways broken English, and slang, are not grammatically correct, but are often examples of authentic language use (Brown, 2015; Richards, 2005; Savignon, 1997).

Before letting them play, I briefly discussed *Lost Pig* and I highlighted the fact that much interactive fiction is like a puzzle; it can be frustrating, but you should try to negotiate and be patient with the text. I then gave them an interactive fiction ‘cheat sheet’ (see Appendix J) and began explaining it. When they started playing, I observed that some students were not using the sheet, despite what I had told them at the beginning of class about the importance of doing so, as well as the importance of looking for information about the text. Some students discussed the game amongst themselves, but very few, and most played individually. After noticing the students had not searched the game online for cheats and/or walkthroughs, I showed the students some cheats that could assist them in completing the game. The extent to which these texts need to be scaffolded in regards to cheating practices or seeking out information, as well as ways to overcome difficult parts of the game, was not an element that I had considered before. I knew that these texts, particularly *Galatea*, could be frustrating and that having cheat sheets could possibly make the playing of the text more feasible. Yet, the lack of students looking online, particularly after I had suggested they do so, was surprising considering that they had been encouraged to do it.

After roughly 12 minutes I noticed one student used one of the cheat sheets followed by another student around 5 minutes later. I let them all play for approximately 20 minutes so that they would have the time to explore the text sufficiently. I then asked if any had succeeded in finding the pig; no one had been successful, which is not surprising as it is a difficult text and it usually takes longer than 20 minutes to discover the pig. I asked which student got the farthest and many students had progressed quite far. Next, they were asked to try the other work of interactive fiction, *Galatea*.

Galatea (Short, 2000) is a text that can be more frustrating than *Lost Pig* because of its gameplay. In the text, the reader/player of this game is an art critic and must negotiate with one character, an artificially intelligent statue, to gather information about her creation. Similar to what I did with *Lost Pig*, after around 15 minutes of game play, I gave the students a walkthrough to succeed in conversing with Galatea. However, only 4 used the walkthrough, despite the fact that the majority of the students were having difficulty with the text. As I walked around, I asked them how they were doing and observed how far they had advanced in the game. Many had not been able to get much information from the statue. After 15 minutes, I conducted a brief, informal discussion about their thoughts on the game. I asked them what they thought of the game, if they found it fun or difficult and why. Many did not seem to enjoy it and found it frustrating, as the statue was difficult to interact with. This is because the statue, Galatea, only responds to precise commands, whereas anything other than a precise command leads to short, abrupt responses. Having to type precise commands may be especially challenging for second language learners, especially if they have difficulty with grammatical elements such as subject verb agreement. Also, based on the students' responses, I surmised that the lack of a set goal or objective in this text made it more ambiguous in that the linguistic interaction is thus the implicit objective of the game. This is different from *Lost Pig*, for instance, which has a clear goal in finding a lost pig, as opposed to simply conversing with a character in the game.

After the informal discussion, I presented discussion questions with the projector for the students to answer. They were allowed to discuss in groups or respond individually, but in either case they were to write their responses after discussing them and send them to me. The questions

were the following: “1) What are other examples of texts²⁸ that use a second person point of view in another context?” (Here I emphasized the fact that though the 2nd person point of view is rarely adopted in literature, interactive fiction often adopts this narrative device. This element is important in that it can facilitate the feeling that the reader/player is more a part of the narrative); 2) “If you had to analyze these two texts of fiction what literary devices²⁹ would you use to discuss these texts?”; 3) “Some of you may have liked (or disliked) these two interactive games. If you were to design a game, how would you improve one or both of these games?”³⁰ The students answered the questions either individually or in groups, as they preferred (in class that day there were 19 students, some completed the questions in groups, while others submitted the questions individually. In total there were ten submissions). I observed that six students looked up 2nd person narration to find texts that qualify as 2nd person narration texts. Two groups spoke in French and four students did the work individually.

The questions were created to elicit discussion and to be used as data that could be connected to the four pedagogical steps in the framework, including the various literacies sought in the study, as detailed in chapter two. The responses to those questions will be analyzed below in relation to the different pedagogical steps (situated practice, critical framing, and transformed practice). Along with this data, a focus group was conducted with 3 student volunteers. Pertinent quotes from this discussion will also be presented below. Also, other responses that articulate elements of other literacies and/or theories that were not discussed in chapter two but emerged

²⁸ I did not specify whether they were texts encountered in class and/or outside of class. As detailed by their responses below, students seemed to have understood the question as texts they encountered both inside and outside of class, which was my intention.

²⁹ In the beginning of the course, before the study began, students were presented literary devices such as plot, characterization, symbolization, etc. to use in their literary analysis.

³⁰ Though students had not completed either game in the class, this question was designed to invite them to consider how they would improve some of the basic gaming elements that they experienced during gameplay.

during focus groups, personal conversations, or observations notes, will also be mentioned in the following four phases where pertinent.

Again, my feeling after this second day was much different than the first. The students seemed engaged, I was more confident in the material, and having the students play the games, rather than simply speaking about them, added an element of praxis. One of the most interesting elements of this day was the absence of cheating, which, as will be detailed below, is an important concept in relation to formal education. In other words, having the students ‘find the answers at the back of the book’ so to speak, seemed destabilizing, or at the very least, not a permissible option for many. Regardless, it quickly emerged that being competent in cheating, or problem-solving, in relation to digital games is an important issue that emerged in this study and will be further discussed in chapter five.

3.3.1 Week 1 – Summary of Literacies, Concepts, and Themes That Emerged During the Week

Figure 2 below presents an overview of the significant literacies, concepts, and themes that emerged during the week, as they relate to each step in the pedagogical framework. The principal data techniques that were used during this week were observation notes, discussion question responses, and the focus group discussion. Upon transcribing and then examining the data, pertinent themes and concepts were noted then entered into a grid for ease of analysis (Appendix F).

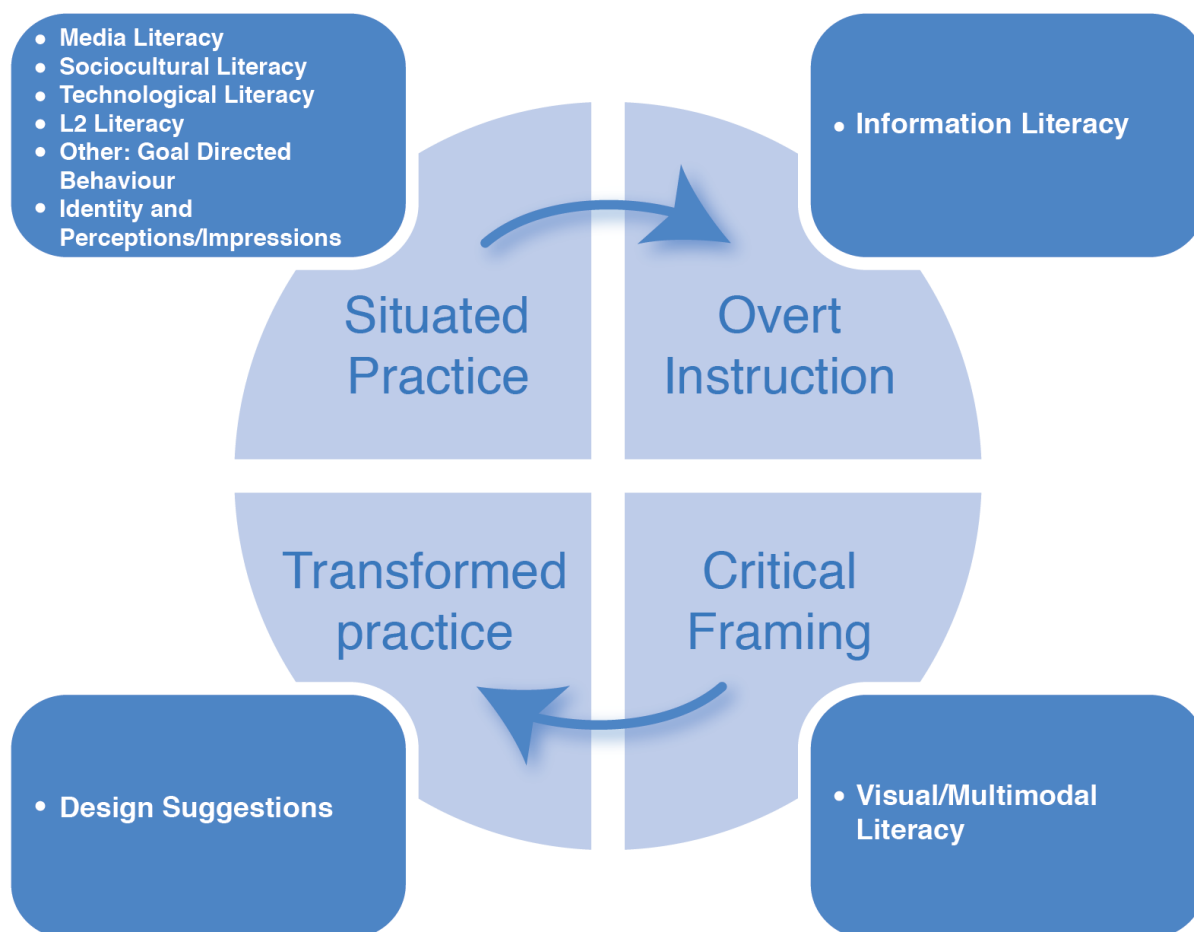


Figure 2. Week 1 – Summary of Literacies, Concepts, Themes That Emerged During the Week

3.4.1. *Situated Practice*

This section will highlight the specific literacies that emerged during the first two classes related to situated practice. As described in chapter two, situated practice relates to the situatedness of knowledge and focuses on learners' previous and current experiences, particularly those that originate from outside school communities and discourses, while emphasizing their importance within the school learning experience (New London Group, 1996, p. 85). Thus, the data points (in the case of this study, various literacies, as well as one concept not previously

considered, goal-directed behaviour) that will be addressed in detail below are tied to moments that relate to students' practices outside the classroom and potential experiences that they have had that can demonstrate the potential to be integrated and elaborated within the classroom.

3.4.1.1 Identity and Perceptions/Impressions

Given that digital games are ubiquitous, particularly when one considers their presence in smartphones, it is not surprising that students would have perceptions of games and game players. This element emerged early in the study during the focus group after the first week when I asked the students about their early perceptions of the study so far. One student responded: "It's not like a normal thing, like, that everybody does you know? It's like, usually people like do the all gaming thing, it's like, you know, the nerd type, you know it's not really like...but it's actually interesting to look at it and see what it's about". The student's reaction is interesting, given that she perceived digital game playing in counter-normative terms. Also, her invocation of the 'nerd type' sets up an opposition of identity; in essence, the ones that play digital games are 'nerds', a form of identity that she does not appear to identify with. As Gee (2007) has claimed, digital games enact identity negotiation and creation on a variety of different levels, especially through a commitment to learning, which requires identification with the group that is associated with that activity. If there is no identity commitment, Gee believes that effective learning will be lost (p. 55). Similarly, Neville (2010) has argued that "narratives are situated within specific social, cultural, and linguistic contexts [...] but also that these narratives are ultimately negotiated on a personal level based on the identities, needs, and unique subjectivities of people seeking entrance to these communities" (p. 453). Another student in the focus group seemed to agree with the first, claiming that: "Yeah, I find it interesting too 'cause, like, at the same time I look at my boyfriend who plays and looks at walkthroughs, like I talked to him about it and he was just laughing

‘cause now I need to do it, so...I find it special, like it relates in a certain way”. This last student’s comment is interesting, particularly how she claims that it “relates”. Indeed, though this student also did not necessarily identify with digital game players like her boyfriend, she did see that it relates to contemporary practices. These issues will be further discussed in the conclusion of this week’s analysis.

3.4.2.1. Media Literacy

Media literacy was present in the manner that students were able to identify the function of different modes of media messages that use second person narration. This was evident from the student responses to Question 1 of the discussion questions from Day 2 in that many students connected the unique second person point of view narration of interactive fiction with texts that they might see in their day-to-day life outside of school. Many made the connection between this narrative point of view and informative texts such as instruction books. The most prominent examples students mentioned were ‘choose your own adventure’ narratives and children’s books. The former can be linked to recent scholarship (Moran, 2018) that highlights the importance of recognizing the history of ‘choose your own adventure’ narratives and their influence on the history of games. Referencing this genre can open up discussion of free will in these narratives and its importance in the analysis of these interactive texts (para. 13). Similarly, the second person point of view may provide a stepping stone to interrogate the limits of narratology focalization, a key concept ascribed to traditional print texts as well as to film analysis; though such a concept has limits in digital game analysis, it is necessary to build upon it to consider the player’s experience in regards to this narratological perspective to arrive at the “modalities of doing” that define and guide contemporary gameplay (Montembeault & Perron, 2018, para. 33).

However, the most interesting connection that was brought up was in one student's response to political propaganda posters. The student made the link between second person narration and the ways posters interpellate, both literally and figuratively, their reader: "In the campaign for World War II [there] were posters with a guy that was pointing at you when you were looking at it and it was written: 'I want you in the U.S. Army' you feel that it is talking directly to you." The student's response articulates the literal way propaganda posters interpellate their intended subject. However, it also gestures towards how one is interpellated by ideologies or, as Althusser (1970) would claim, state apparatuses. Althusser believed that ideological state apparatuses (ISAs) interpolated its subjects in a variety of ways and is a necessary function for ideology to concretize itself in everyday practices. One can look upon the use of propaganda posters as a way of being interpolated by, in this instance, the ISA as the military who calls upon, and thus subjectifies its citizens, as potential soldiers for a war. In viewing this poster, one recognizes themselves as a citizen of the state (with its implicit variety of ideological implications). Though the student's comment does not necessarily reflect an understanding of Althusser's concept, it does demonstrate a critical regard towards the function of this type of media and could be further elaborated inside the classroom during the overt instruction phase. One possible way of doing this is that the teacher may begin by scaffolding the students' knowledge of interpellation and let the students identify the types of media that often fulfill this function.

3.4.3.1 Sociocultural Literacy

An element related to sociocultural literacy emerged when, after the game play of *Galatea*, I asked if anyone found the text difficult or frustrating, and most agreed. I then asked how they overcame it and no one responded. Finally, I personally called upon the two students whom I

knew had looked at the walkthroughs and asked them what they did to overcome their frustration and difficulty with the texts. One, seeming as though he felt ‘caught’, shyly responded: “I cheated”. I affirmed his comment by saying “Yes, that’s great. Exactly what I said you could do!” The student’s reluctant response can be related to an interpretation of sociocultural literacy that differs from cultural literacy mentioned in chapter two. As discussed in that chapter, cultural literacy can be defined as a general, cultural knowledge according to predetermined norms of a particular society (Giddings, 1988; Hirsch, 1987). However, sociocultural literacy (Daiute, Campbell, Griffin, Reddy, & Tivnan, 1993; Moje & Lewis, 2007) draws upon the importance of sociocultural competence as an added element to linguistic learning. As Hinkel (2001) states, “[i]n addition to learning to note the linguistic and situational variables in interaction, it is important that learners focus on the sociocultural features of speaking and behaving” (p.447). Thus, sociocultural literacy, similar to Green’s (2002) explanation of cultural literacy in terms of being knowledgeable about what is appropriate or inappropriate to communicate or express in a given situation emerged. Despite the fact that certain types of cheating in regards to digital game play is a common, and some might argue, necessary act, in the context of formal education, all forms of cheating are prohibited. Thus, students, after years of formal education may not be used to being allowed to cheat in the classroom and are still unsure whether it is appropriate. Once again, this point, and its implication for formal education, will be further discussed in chapter five.

3.4.4.1 Technological Literacy

One student came to see me the day after the first class to say that he could not get Steam (the digital game-playing application used for their digital games) to work. When I asked him what he did to resolve the issue, he mentioned that he searched online, looked at forums, yet could not resolve it. He wanted to perform some troubleshooting, such as connecting through a

cable, as opposed to WIFI, but was not able to, given that he was not sure if he could connect cable or if there was a cable jack available in the place where he lives. Eventually, he ended up rectifying the issue by using the school's WIFI. I was impressed by the troubleshooting this student had performed, and in particular, his proactivity in seeking out solutions online such as on forums. Indeed, technological literacy, inasmuch as a basic definition of how technological devices work and attempting to rectify issues, can apply here. It can also be argued that information literacy, where and how to retrieve information to resolve possible solutions, also applies. This anecdote also underscores the issues and difficulties surrounding technology, especially access to it, not just for teachers when introducing these types of texts (such as digital games and digital literature), but also for students. Moreover, it highlights the knowledge and practices students must engage in with these technologies which are often not taught or enacted in formal learning contexts, but are learned, practiced, and applied in out of school contexts. One such practice, as will be discussed below, is how technology can be taken for granted in terms of being able to use it without constraint.

3.4.5.1 L2 Literacy

Given interactive fiction's reliance on the linguistic form, in that these games are played via written text (i.e. the visual prompts are written in text and the reader/player must interact by typing words and actions), the affordances for language learning were evident. Indeed, the three students during the focus group were L2 learners who acknowledged the ways interactive fiction provided them with L2 learning possibilities. One student claimed: "it just helps me not to lose my English by reading it or...yeah just reading it or writing...like if you chat...so like it's not in the aspect of talking, 'cause talking that's where, like I'll never speak English so ... but, yeah, it helps". The student's emphasis on not speaking, possibly because she is shy, is interesting

considering that she believed these texts function as an effective, interactive substitute. In other words, as opposed to interacting in person via oral communication, these texts provide an interactive experience where one does not need to speak. Another student also touched on the importance of interacting, here, contrasting it to traditional print literature: “Well, ‘cause you’re not just reading a story with all a bunch of words [...] you also interact, so you’re using your English...to practice it”. Once again, the ‘practice’, and thus active element of interactive fiction is emphasized, contrasting it to more passive ways of traditional print literature. Finally, the third student emphasized the importance of correctly spelling the inputted actions: “If you don’t [write] it correctly it doesn’t work, like the game is not gonna answer you so you have to find a good way of typing words...” The student’s implication is that one must be precise and thus conscious of using correct terms and not making spelling or grammatical errors. These students’ comments effectively highlight the important implications this genre of digital literature can have for second language learning.

3.4.6.1 Other themes/categories that emerged: Goal-Directed Behaviour

One concept that emerged during this first week that had not been considered when planning the study was goal-directed behaviour. Locke and Latham (2002) define goals as “the object or aim of an action, for example, to attain a specific standard of proficiency, usually within a specified time limit” (p. 705). Given that most works of digital literature and digital games have a goal or objective to complete, it is perhaps not surprising that this emerged as a theme in students’ comments and discussions. Indeed, this theme emerged during the first focus group at the end of week one, when the students in the group were asked about their sense of control in relation to digital games (in this case, interactive fiction) versus traditional print works. One

student discussed the concepts of various obstacles impeding the reader/player from the main goal, which is the completion of the story:

I think the main story, like it's written, like you have a main goal, but there's sort of like, traps everywhere so, instead of reading where you go directly to the goal and you know what's going on, the other one [*Lost Pig*] there's [a] trap you can fall in it, like it take more time to reach the goal.

What's interesting about this student's comment is their acknowledgement of not only a main goal, which is to complete the text, but the series of other smaller goals or processes one must complete to proceed. This point becomes more important later in the four-week study, particularly in relation to procedural rhetoric and the ways in digital literature and digital games feature significant differences in comparison to traditional print texts. Moreover, this demonstrates a form of reading and interaction that relies on problem solving tasks that, despite being more common outside of school environments, can have meaningful implications inside the classroom.

3.5.1. *Overt Instruction*

The next pedagogical step to be discussed from the first week is the overt instruction phase. Overt instruction, as the New London Group discuss, includes collaborative efforts between teacher and student, where the teacher becomes a mediator for the students' learning process, assisting learners in constructing and co-constructing knowledge amongst, and by, themselves. It is during this step in the framework, and in the pedagogical/research design, that

the teacher's role is perhaps the most prominent. As will be detailed below, only one literacy, that is information literacy, was articulated during week one.

3.5.1.1 Information Literacy

The most difficult element of this step is to know how much of a mediator an instructor needs to be with these digital texts, given that one of the objectives is to see how and what multiliteracies the students will articulate on their own. For instance, during the study of interactive fiction, I provided the students with a 'cheat sheet' (<http://pr-if.org/doc/play-if-card/play-if-card.html>), which featured information on exactly how one is expected to interact with this genre of texts. Furthermore, I invited the students, after noticing that they were having difficulties with *Galatea*, to search for walkthroughs of this text. Yet, doing this means that I, the teacher, may have affected their articulation of information literacy given that I provided them with the noted information as opposed to letting them find it on their own. However, interestingly enough, it also seemed that the students were not willing, or did not want to, search for the information on their own or to discuss with peers how to proceed. It is unclear why this was, but perhaps it relates to Gee's (2007) comment on how few people who play digital games read the games' manuals first; rather, they immediately jump into the game and figure it out as they go along (p.98). For Gee, this immersion relates to the learning principle of situated meaning:

The problem with the texts associated with video games – the instruction booklets, walkthroughs, and strategy guides – is that they do not make a lot of sense unless one has already experienced and lived in the game world for a while. Of course, this lack of lucidity can be made up for if the player has read similar texts before, but at some point these texts originally made sense because the player had an embodied world of

experience with games in terms of which to situate and spell out their meanings.

(p.98)

Thus, the desire to immerse oneself in a game task as opposed to studying it in the abstract first, could be related to the importance of situated meaning. What is interesting is that, as mentioned above, students did experience frustration with these texts, particularly with *Galatea*, so it is curious that so few students attempted to retrieve information online to overcome their difficulties. However, during the focus group, one student clarified what may be a reason for their reluctance to view cheats and walkthroughs: “when you play a game, you don’t really want to go on cheats, ‘cause you wanna have the satisfaction of like, I did it on myself, I didn’t need help. So, it’s a guilt at the same time ‘cause like: ‘Oh, I went to look at a cheat...’”. Thus, it could be that the students were reluctant to retrieve information about the game because they would rather immerse themselves in it and first try figure out the difficult parts for themselves. Furthermore, the length of time someone will play before they search walkthroughs is a highly subjective experience and is thus as a pedagogical issue, it is difficult to address in a classroom with students who are at various different parts of the game. Therefore, it becomes more of an individuated activity, and thus the role of the teacher as a mediator becomes even more crucial. The individuated aspect of situated meaning will be further discussed below as it emerged more and more in the study, particularly in relation to more salient examples such as embodiment and empathy.

3.5.2.1 Sociocultural Meaning Making

The individual elements of these games, particularly the way students negotiate meaning from these interactive texts, was an important element of overt instruction. For some students, the games were quite difficult and frustrating to interact with; thus, their individual interpretation was hindered. When discussing this in the focus group, one student brought up the importance of class discussion around the texts to help understand the meaning:

Yeah, sometimes you just need to like, look at every aspects and like, put it together to understand, but sometimes it's hard to, like, there's hints, like hidden, like if you wanna say, it's hard to understand. Then, when you talk about it in class, you understand better like the story, like 'cause everybody has a different point of view, so, like, maybe she understood a sort of way and I understood a sort of way so at the same time have a different point of view, so, like, maybe she understood a sort of way and I understood a sort of way so at the same time like it can be frustrating at times.

Indeed, class discussion is an important element when teaching with digital games given that their interactive affordances can provide a variety of different, personalized narratives. Even though this was not as much the case for interactive fiction given its linear-styled narrative, this does have larger implications with more non-linear texts such as hypertext fiction and hypermedia texts that were looked at in the subsequent weeks. Nevertheless, the importance of a shared discussion so that all students can negotiate the texts' meaning socially emerged as a significant factor to meaning making.

3.6.1. *Critical Framing*

The third pedagogical step is critical framing. For the New London Group (1996), critical framing implies that learners can constructively critique the theory they have encountered, account for its sociocultural specificity, and creatively apply it on their own (p. 87). Below, I will focus on discussion question two (If you had to analyze these two texts of fiction, what literary devices would you use to discuss these texts?), as it applies most closely to the New London Group's concept of critical framing, particularly in the way students demonstrate their ability to critique the theory they have seen and creatively apply it on their own. The primary source of data for this step will be responses to the discussion question and the focus group conducted at the end of the week, given that this was where students articulated the most pertinent literacies and responses that relate to critical framing.

Students demonstrated their ability to situate a variety of literary terms in the genre of interactive fiction. In regards to Question 2, 8 out of 10 responses showed that students were able to apply the literary concept of 'setting' with one student claiming: "In the introduction to the game, the description of the context allows the player to understand the basis of where and how he must accomplish his mission/task". Indeed, the 'time and place' of when the narrative takes place was mentioned by many as important in order to succeed in the game. Next, the literary concept of characterization was mentioned, with 5 out of the 10 responses using this term. Following that was the use of imagery, mentioned by four submissions, and foreshadowing, also mentioned by four submissions. This last one is interesting in that most of the responses discussed the concept of foreshadowing in narratives (when a writer gives an advance hint of what is to come later in the story) and related it to the way hints are used in games (the emphasis

of certain objects that are mentioned); thus transferring the function of the device from one form (traditional print literature) to another (digital literature). Following that, some responses included an analysis of plot structure (three out of 10 submissions), and finally 1 out of 10 discussed the importance of point of view. Overall, students were found to have an understanding of some devices. More importantly, they were able to creatively apply the devices to these new texts, despite their lack of previous experience or familiarity with the different modalities, not to mention the challenges in developing typologies of analysis in the digital realm (Pleau, 2017). Indeed, that they were able to extend their analytical gaze towards texts that are read and consumed differently, via a complex interface, demonstrates the possibilities this genre of digital literature can provide in the literature classroom. But, as mentioned in chapter two, one must also be wary of not misrepresentation a text by forcibly transposing terminology from one medium to another. Therefore, it became important in later iterations that students are able to ascribe terms such as procedural rhetoric that are particular to these genres.

3.6.1.1 Visual/Multimodal Literacy

In addition to the application of literary terms and devices to the genre of interactive fiction, visual and/or multimodal literacy was frequently alluded to during this first week. The lack of the visual mode within the text-only genre of interactive fiction was quite striking for many students. During the focus group at the end of this first week, one student claimed: “Cause like, you don’t have control of the book, like the books completely written [...] where’s the game, like that game that we played today, it’s like, you have control of it but you don’t in the same time, because [there’s] just like text, there’s no visual”. Here the student begins by comparing player/reader agency in traditional print literature (books) to games (interactive fiction), implying that you have more agency in one (interactive fiction) than the other (books), because you can

interact and advance the narrative by inputting actions. However, this control in the case of interactive fiction is also limited, as the student implies, given that there is often no visual mode and thus, the lack of the visual mode meant diminished agency. And indeed, this student was not alone in her analysis. Another student also discussed the difficulties of interacting with this type of text because of the lack of the visual mode: “Like it’s hard ‘cause when you’re a visual person and now it’s always text, it’s kind of...you need to visualize it and it’s hard”. When I asked why this type of visualization was much different than reading traditional print, the student responded: “Yeah but you don’t think about video games in a sort of way of cause when you think video games, you think ‘visual’, that you see and you manipulate like a character, if you want. But now, in this kind of way, it’s texts. So it’s like, just, I feel like you don’t have control ‘cause it’s like, you don’t see, you just read it and you imagine it”. Again, the issue of perception was brought up, students perceived digital games to contain certain elements, and obviously, they are correct in assuming this, as most games are quite multimodal. However, the lack of the visual mode in this text for some students was disconcerting.

The students’ above claims match similar comments by students when first playing interactive fiction. Game designer Erin Hoffman encountered this when she had her students playtest a text-based prototype of a game, *Mars Generation One: Argubot Academy*. As reported by Matthew Farber, in his text *Gamify Your Classroom* (2015), students discussed their reactions to the text when interviewed in a subsequent focus group. Ultimately, the students enjoyed the game, but as Hoffman relates: “The spatial stuff, like mapping and cardinal relationships, was challenging” (p. 71). The fact that students in both situations rely so heavily on the visual mode in interactive narratives is interesting, particularly given the former citations relating it to agency. All of this has immense importance when considering literacy, especially its connection to

multimodality, and the ways in which many contemporary learners ‘read’ by using the visual, as well as various modes. Indeed, as many have noted (Jewitt, 2005; Kress, 2011), young people today, more than ever, are learning to read and write often in places that feature a variety of different modes, and often online. Not only does this have implications for first language learners, and, as scholars like Thorne (2008) have demonstrated, has significance for the ways these digital, and inherently multimodal texts can affect second language learning.

One can conceive of making meaning as a form of control, in that understanding something allows us to grasp it and ascribe it constraints and limits. Given that these students’ meaning-making abilities were hindered by the lack of the visual mode, it demonstrates the importance multimodality has for some students, particularly for these types of texts; texts that rely on active interaction. However, for some students, the absence of the visual mode in this study allowed them to supplement the text. To rectify this lack of multimodality, one student said during the week’s focus group that he began drawing a map of the space where the character was to allow him to visualize the surroundings. This, especially the reliance of some students on multimodality, will be further discussed in chapter five.

3.7.1 Transformed Practice

The final phase in the four-pronged design is transformed practice. As mentioned in chapter two, transformed practice allows students to re-create a discourse for their own purposes and in doing so transfer previously developed meaning-making practices in other sociocultural contexts or sites (New London Group, 1996, p. 87-88). For this step, the results of Question 3 (How would you improve one or both of these games?) will serve as the principal data point,

given that students' responses demonstrated their ability to transfer various meaning-making practices into the genre of interactive fiction.

3.7.1.1. Design Suggestions

The student responses covered a wide variety of design suggestions in relation to how they interacted with the texts. These examples demonstrate their reliance on particular meaning-making practices. Seven out of the 10 submissions stated that more context (information) about the game was needed. This could be interpreted as relating to instruction before the game (i.e. scaffolding, which also applies to, and was discussed in, overt instruction above). It could also be interpreted in the context of the game itself in that it should provide instructions as to how to play, such as a tutorial. Six out of the 10 submissions mentioned adding visual and/or audio elements, more specifically a map to the game (as mentioned above) as a way of improving it. This supports some of the student's frustration of not knowing where to go and the lack of visual representation of the various locations in the narrative. Few of the submissions (two out of 10) discussed the need to improve the commands. This relates to the very specific nature in which the player/reader must enter commands such as inputting simple action verb phrases, as opposed to using the arrow keys, a mouse, or a joystick. As mentioned above, this was sometimes frustrating for students, given that the game requires very specific linguistic commands for the character to progress in the game. One might wonder if these frustrations arose from many of the students being second language learners and that they had difficulty inputting precise commands. However, this is doubtful considering that the students were mostly proficient in English (this is a second year course and their third, and in some cases, fourth English course in an Anglophone college). Yet once again, it does reveal a significant point of convergence between second language acquisition language teaching and learning, and digital, interactive texts.

3.8.1 Data Triangulation

As was discussed in the methodology section, data triangulation was used to illuminate some of the elements in the implementation of the design and to shed light on pedagogical techniques that may be improved for the future teaching of digital games and digital literature. In order to triangulate data from the first week, it is pertinent to examine the survey data and triangulate it with the observation notes and focus group discussion. In the pre-study survey, two respondents mentioned their lack of interest in digital games. This data was supported later when, during class discussion a few students complained about having to purchase games for the course (because the survey was anonymous, I cannot confirm whether they were the same students). The fact that they had to purchase them (with one student specifically mentioning her limited budget) gives some explanation as to why students may be less interested in purchasing digital games. On a small scale, this can be said to be consistent with what Howe (2012) would characterize as conjunctive mixed-methods triangulation. In conjunctive mixed-methods triangulation, different forms of data, be they quantitative or qualitative, may be used to compare, converge, and diverge, to assist in determining causality. In the above-mentioned case, the students' perceived disinterest in digital games might have been caused by budget constraints. However, other reasons may apply to students' lack of interest, such as their dearth of knowledge of how to play them, which was evident in the pre-study survey in that many of the students do not frequently play digital games. Another possible element was students' possible negative perceptions of digital games, which has emerged in game studies scholarship (Bourgonjon, Valcke, Soetaert, & Schellens, 2010; Fengfeng, 2008). Indeed, as was mentioned during the focus group, one student in particular held a distinct perception of game players that can affect one's attitude towards digital game playing. Unfortunately, at the time, I did not consider inquiring further into the students'

reluctance. Regardless, what is important is that the pedagogue avoids the common assumption that all young students will be immediately interested, and many even knowledgeable, when using these types of texts.

3.9.1 Modifications to Future Iteration

The importance of repeated iterations when conducting design-based research studies was also mentioned in the methodology section. Though it was not exactly the same iteration given that the genre of text changed week to week, the pedagogical design remained relatively the same, consisting of the four steps prescribed by the New London Group. Thus, following the protocols of design based research, each iteration required a certain degree of analysis in regards to the data produced. Upon analyzing the observation notes at the conclusion of the first week, I decided to further interrogate students about their ‘cheating’ practice in future iterations. For instance, later in the study (as will be discussed below) I asked them what sites they visited and why, believing that interrogating the topic of reputable sites may be connected to information and possibly, critical literacy.

Furthermore, it was apparent, after going over the data from the week that there were issues around the scaffolding of the texts presented. I decided that I needed to consider how much information to give students vis-à-vis how much of the game they need to figure out on their own. Finally, I decided that in future iterations of the study, I would need to carefully consider what information to give them and how to appropriately scaffold the texts. All of the above considerations are presented in the figure below (figure 3).

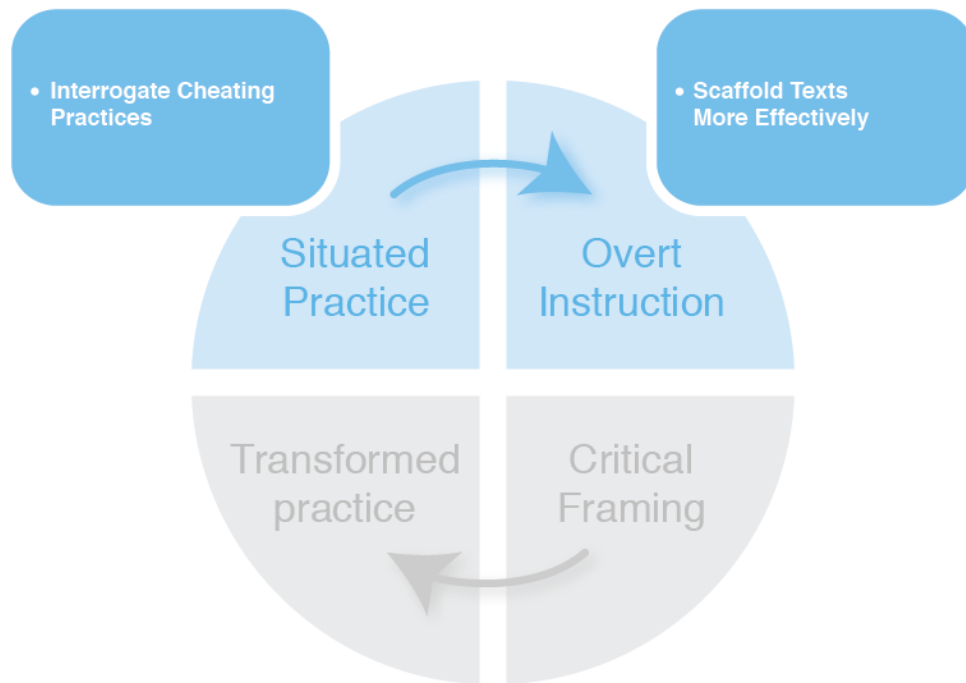


Figure 3. Week 1 Pedagogical Considerations

3.10.1 First Iteration: Week 1 Conclusion

Overall, the first week was informative in a number of ways. Specifically, the students' ability to read and play interactive fiction proved interesting in how they did (or did not) use cheats and walkthroughs. Thus, the pedagogical aspect of how to teach these texts was sometimes challenging in that certain competencies in how to read/play interactive fiction, but also how and where to find ways around difficult elements, is an important aspect that relates to other digital games. Also, some of the students' negative perceptions towards digital games was, in some ways, surprising and had not been considered before the study. At the time of the study, some of these elements (information gathering/cheating practices) were addressed in future iterations. But with the distance of time, more contemplation has taken place in regards to these complex practices and will be addressed in chapter five.

4.1. Second Iteration: Week 2 - Hypertext Fiction

The next week's genre of digital literature to be analyzed and discussed by the students was hypertext fiction. As discussed in the first chapter, hypertext fiction is a genre of digital literature that features hyperlinks to advance the narrative. Though works of hypertext fiction, such as *afternoon, a story* (1987) by Michael Joyce and *Uncle Roger* (1987) by Judy Malloy, began appearing before the popularity of the internet, the increasing presence of this medium of communication allowed for works to be shared and distributed online. This said, the choice of genres for this study followed an inherent logic in that moving from interactive fiction to hypertext fiction, then to hypermedia games and digital games, demonstrated an evolution in modes (visual, audio, gestural) from week to week. For instance, interactive fiction is limited in its modes given that it is primarily the textual, or linguistic mode that is featured. Also, narrative choice is limited given that students must key in precise commands to advance the narrative. Hypertext fiction tends to include more modes (in the case of the texts seen that week, visual and audio), and the various narrative possibilities, depending on the text, can allow students to consider various choices and possibly reflect on the consequences of these.

On the first day of the week, students analyzed two hypertext fiction texts: *Surviving History: The Fever* (Ponce, 2014) and *Beneath Flores* (Snow, 2015). On the second day of the week, students were given instructions on their own hypertext creation activity (Appendix C) and time during this second day was allotted for them to begin creating their narratives. Similar to the first week, a presentation of each day's observation and field notes will be presented, followed by each phase of the pedagogical design and the various literacies that were enacted during each step.

Finally, a presentation of the data triangulation is presented as well as future considerations that were noted for the following week's iteration.

4.1.1. Day 1: Observation/Field Notes

Immediately on the first day of week two, it became apparent to me that few students seemed to be paying attention during the overt instruction period as opposed to the previous week (i.e. many were reading/looking at their screen for most of the overt instruction period). Though a more profound scaffolding took place (as per the results the week before), via an explanation of what hypertext fiction is, how to play it, and a brief synopsis of the texts they were to play that week was addressed (though a little less explanation for *Beneath Flores*, more on this below), students seemed to pay less attention and were more distracted by their computers. It could be the case that, during the first week, they had yet to experience how I managed the classroom in this new environment and now that they had seen that they could get away with going on websites while I spoke, they would take advantage. Again, classroom management, in so far as keeping students on task and paying attention when technology is present, is extremely important particularly when they have easy access to it (such as when students are facing computers). Some students were often quick and eager to check their social media sites and because of this, did not pay attention to classroom instruction. Indeed, recent research has well documented this phenomenon (Carter, Greenberg, & Walker, 2017; Hembrooke, & Gay, 2003) and many teachers today have experienced this to some degree with students frequently being distracted by their phones or laptops. However, in a class where students are meant to use computers in the classroom, any solution becomes complex. Besides constantly supervising the students to make sure they are listening and not visiting sites online, an instructor teaching in a computer lab has

very few options to make sure students are paying attention. Thus, for whatever benefits desktop computers, laptops, and tablets bring to the course, there are also disadvantages.

After an explanation of the first work of hypertext fiction, I began by letting them play *Surviving History: The Fever* (Ponce, 2014). The narrative takes place in Philadelphia during the Yellow Fever outbreak of 1793. Given the importance of the setting to gameplay, I felt it was crucial that they were aware of it and I therefore spent some time scaffolding this element. It was my opinion that the historical, and somewhat nonfiction element of this text, may appeal to some of the students who prefer a more realistic narrative.

Along with classroom management, one important theme that emerges with these digital texts is time management, particularly in relation to the delicate balance of how long one should let students play their games. In other words, an average amount of time needs to be decided upon, of how much time it takes for students get bored or restless, as in most pedagogical activities. For instance, I noticed that when students get bored, or frustrated with an interactive text, they quickly become restless and begin searching other websites online, not related to the games. However, other students seemed to be enjoying and playing their game. In these cases, I gave a little more time to allow the students who seemed engaged, to play, and I informally discussed with the restless students what they thought of the game and if they found it too difficult.

During gameplay I noticed that one student looked up a challenging medical term. Indeed, *Surviving History: The Fever* contains many terms in relation to medical vocabulary (this difficulty was also made evident in other data such as the focus group discussion mentioned

below); yet later, when I had asked the class during the discussion period, only one student admitted to looking up a word. Another interesting aspect is that one student did not understand why on one page, there was only one hyperlink that was available to advance the narrative, rather than a choice of links. This confused the student as she thought each page would contain more than one hyperlink, i.e. more than one choice. Already, this student seemed to have developed a 'hypertext fiction literacy', or at least expectations about it, in that she was able to understand the functionalities expected in these texts.

After having the students read/play *Surviving History: The Fever*, I asked them some discussion questions informally (e.g. What do you notice about the style of writing? Is it written in a style that is similar to the short stories we have seen? Is there anything different about the writing? Did you learn anything interesting from the narrative? Does learning history this way seem interesting?). For some reason, few seemed inclined to respond and the ones that did only mentioned that it was interesting to learn history through this form (hypertext fiction).

Finally, I had students play *Beneath Floes* (Snow, 2015), followed by a discussion question period in which they were given the following discussion questions: 1) What is the point of view? How does it affect the interpretation? 2) Did you notice any other literary devices? 3) What do you think the meaning/theme of the story is? 4) Compare and contrast the 2 hypertexts. The students were given time to discuss in groups or individually and then asked to submit their responses via email. Their responses will be discussed below in relation to pertinent literacies.

Beneath Floes is a game that takes place in an Inuit community. The game is about an Inuit legend of a mythical creature that carries children under ice floes. A couple of students

enjoyed it as it contained more multimodal elements (sound and image) in comparison with *Surviving History: The Fever* that only contained some images. However, upon asking them, the students did not seem to understand the game's meaning. This text is not as straightforward as *Surviving History: The Fever*, given that the game's theme is a complex commentary on storytelling. It could also be argued that part of its thematic element is 'othering': the ways in which people are made to feel like an 'other'. This occurs on the level of form (the non-linear and unconventional narrative development), as well as content (its reliance on Inuit cultural signifiers such as Inuit terms, allusions to Inuit cultural references). Despite the need for emphasis on scaffolding revealed from the design's iteration the previous week, I did not want to give away too much of this thematic element, as issues around feeling 'othered' by this narrative is, I believe, part of its intention. In other words, if the text were made completely intelligible before playing, it could lose some of its purpose. The reason for my decision is I believe, like Spack (1985), that explaining too much of a literary work before students read it can spoil "the pleasurable literary experience of a work of fiction" (p. 710). However, perhaps because of this, students did not seem to respond well to the game, claiming that it was unintelligible and difficult to decipher its intention.

4.2.1 Day 2: Observation/Field Notes

On the second day of this week, the entire course period was dedicated to students' hypertext narrative creation. To begin, I presented the hypertext narrative evaluation guidelines to them (Appendix C). The students were then sent a brief tutorial via email on how to create hypertext fiction narratives (https://www.youtube.com/watch?v=5yCZaQLb_Kw) along with the link to the free hypertext creation software *Twine*. This was done in order that they view it in class before working on their narrative. Sending them the link seemed to be the most effective

way, given that each student could advance at their own pace when watching the video. I let the students know that they only needed to watch the first five minutes of the video as this covers the basics of hypertext narrative creation using *Twine*.

Throughout the creation of their hypertexts a lot of students helped each other, asking each other questions about how to create their texts. One student asked the other what a word meant in English. This same student said later: “It’s neat, the types of choices you make are like life; when you make choices in life”. The class ended with the students working on their hypertext narratives.

4.3.1 Week 2– Summary of Literacies, Concepts, Themes That Emerged During the Week

Figure 4 presents an overview of the significant literacies, concepts, and themes that emerged during the week, as they related to each step in the pedagogical framework. The principal data techniques that were used during this week were field notes, discussion question responses, the focus group discussion, and the hypertext narratives including the students’ walkthroughs of them. It is important to note that the analysis of their hypertext narratives and walkthroughs was not done until after the course was completed, as it was too time consuming to do it in the intervening four days between each week. Thus, they are not mentioned in the Modifications to Future Iteration section, as these were not considered when those modifications were considered. Upon transcribing and then examining the data, pertinent themes and concepts were noted then inputted into the grid (Appendix F).

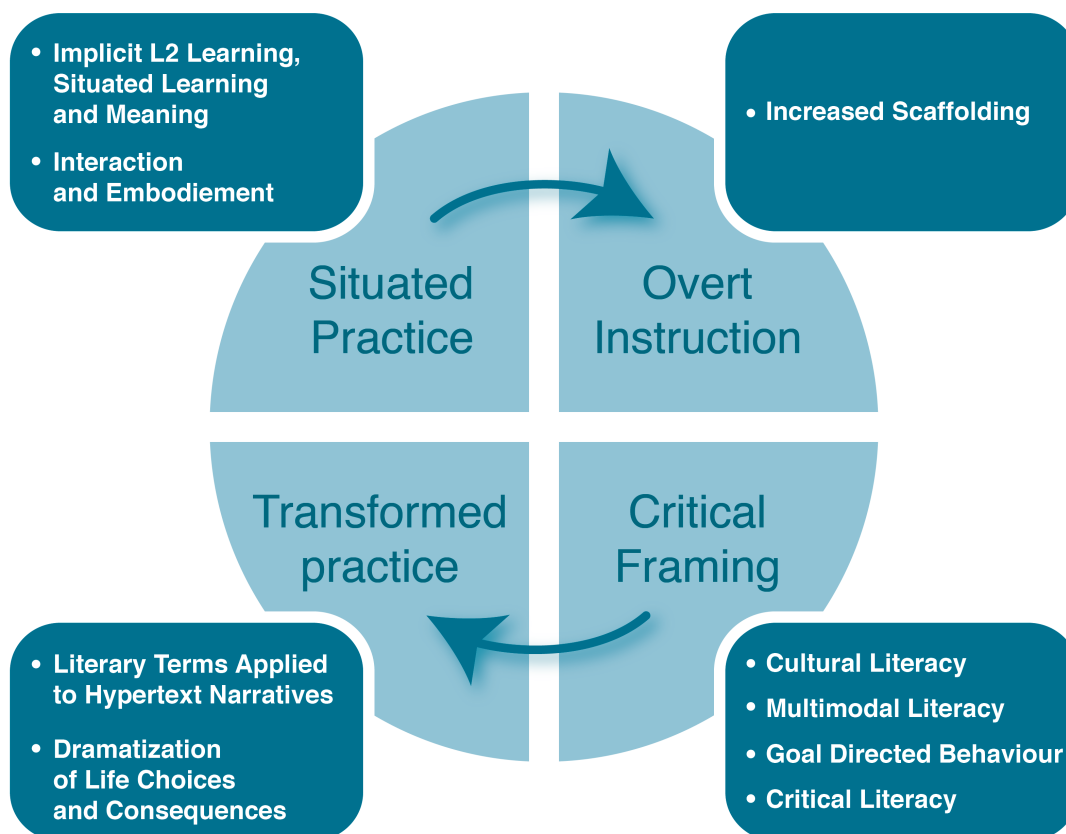


Figure 4. Week 2 Summary of Literacies, Concepts, Themes That Emerged During the Week

4.4.1. *Situated Practice*

The genre of hypertext fiction can afford many connections between the students' previous and current experiences, particularly connections outside of school communities and discourses. This was highlighted in a slide from the PowerPoint presentation, where I stated that "the non-linear forms of hypertext fiction relates to the real world (our contemporary situation) in that they represent our, at times, scattered and dispersed way of gathering and retrieving information". Though this topic did not emerge during the data collected during this week, it did emerge in the final focus group at the end of the four-week study (and will be discussed below during Week 4). The data that will be highlighted are related to the various literacies that were

articulated during the situated practice phase. The most pertinent data to illustrate this derived from the focus group that was conducted at the end of the week, as well as the discussion response submissions students submitted on Day One of the week. The selected data presented below highlight the ways in which students were able to make connections between this genre of digital literature, elements of second language learning (those of whom English was their second language), and particularly the affordances digital literature provide in regards to situated meaning.

4.4.1.1. L2 Learning and Motivation

During the focus group at the end of the week, I asked the students about learning English as a second language via hypertext fiction. One student responded by saying:

Well, because of the interaction that is being made with real life or something like...our perception of the story, it gives us more motivation, I guess, learning and reading our English, because just reading a text, sometimes, like, yes it's fun, you can know something, understand something, but you don't have a...like...being a part of it, makes you more interested in it and like, if I would read a story just on paper, like I read it just to read it. Like, I would kind of try to understand but not more than that.

Being involved in the 'story', as the student is claiming here, can have ramifications for motivation, as the student seems to feel more implicated, given that the text is calling on the student to play a role in the narrative. As discussed in chapter one, motivation in second language learning and teaching is well-documented (Dörnyei, 2009) and some research has been conducted in relation to digital games, demonstrating that students are more engaged, motivated, and

attentive when using digital games to learn English (Guerrero, 2011; Sundqvist & Sylvén, 2014). Yet, the connection to ‘being *a part of* the story’ has particular importance for those of us teaching literature in an implicit L2 learning situation, as this may give the learner the unique ability to situate the language in context.

4.4.2.1. Implicit L2 Learning, Situated Learning and Meaning

Implicit English learning and the importance of multimodality for language learning (sight word recognition) are topics that were also mentioned by some students during this week. Implicit language learning can be understood as synonymous with Krashen’s (1994) input hypothesis, in that language learners learn with little to no explicit instruction or focus on form (grammatical and/or syntactical rules). One way implicit learning can be activated is via sight-word recognition, and thus, multimodality. This was evident when one student claimed: “Like, if you don’t understand a word, at least you can see like a little bit the imagery and kind of interpret it as we thought it would be so it helps a lot.” Again, multimodality was important for some students, as evidenced above, in regards to understanding interactive fiction, but particularly for second language learners. This can also be connected to situated learning, given the situated meaning affordances in digital games. Gee (2013) has addressed this issue when he states:

If a person can associate images, action, experiences, goals, interactive dialogue with words, that person has situated meaning for those words. If a person can only associate other words (definitions, paraphrases) with words, then that person has only verbal meaning for those words, not situated meanings. (p. 64)

Thus, for Gee, situated meaning has strong implications for language and literacy learning given that a contextual connection can be made to words and phrases, which allows the language learning to be more meaningful. The fact that interaction is involved only strengthens the possible connections between language and reader/player. These elements show the convergent power of digital literature and digital games in that a number of formal elements (multimodality, interactivity) afford learning possibilities.

4.4.3.1 Interaction and Embodiment

Interaction and embodiment have obvious connections to situated meaning and can allow the player to experience a strong connection to the text. Rather than reading a text and having an objective distance from it, digital literature and digital games afford an interaction that can allow the reader/player to embody the character in a story, giving them a more subjective experience (Gee, 2008). This was brought up many times, including during the focus group in regards to hypertext fiction. One student claimed that:

I feel like mostly we are part of the story, like we act into it. We have, like, decisions to make, which can lead to like other outcome of the story, other endings, it could be good and it could be also bad. I feel that we are more, like, responsible of what's happening in the story.

This embodied element was also echoed by another student, who stated:

Yeah...sometimes [in] the Fever, I went to one ending that they would put some pressure on us like to choose quickly, so at this point, you just read the first sentence

and make a choice, 'cause sometimes, it can be worse, I guess. I didn't try to just wait, but the intensity of the context was very stressful, so you just don't think about the words that you read and just go with the answer.

In the discussion production that students submitted via Word documents, another student mentioned this aspect:

It uses the second person point of view. The narrator is reading the story to us. You feel that you are part of the story, that you are the protagonist of the story. For me, it affects my interpretation in the sense that I don't want to act without thinking about the condition. I kind of care about the character because it is me, I don't want 'myself' to be in trouble or going through a bad ending. What leads me to be more careful with the decisions I take. It also leads me to feel more attach to the story, I take the time to visualize the story more than if I don't feel that I belong to that story.

This element of situated meaning (and a sense of embodiment) has important implications not just for language and literacy learning, but also for literature teaching. To situate knowledge and action through their interaction with these texts allowed some students to be more self-reflexive, given that they are a participant and actor. Thus, considering that some of the English college-level literature courses are to “develop strategies that promote reflection on their knowledge and actions” (MELS, 2009, p.3) and promote “self-reflective and ethical practice in [the students’] learning and actions” (p.7), situating them in the learning that formal education wants them to achieve can become more meaningful via these digital, interactive texts. This is extremely

important in formal education given that for many students, there is a perception of a divide between what they learn in school and what they practice and experience in their daily life. And indeed, this experience, though virtual, can bring them that much closer to experiential learning (Kolb, 1975) in that they more closely understand these concepts in a more practical, and less theoretical, sense. The more experiential learning they can encounter within coursework that allows them to more actively encounter real-life situations or practices that they may partake in outside school will certainly be more meaningful for them.

4.5.1 Overt Instruction

During this second week, particular elements of overt instruction were more reflexive during the teaching process. For instance, scaffolding the texts was a more conscious process on day one, to make sure that the students had had enough information about some of the texts, despite the fact that there were also concerns of giving them too much information (as detailed above in relation to *Beneath Flores*). More importantly, during the hypertext creation of day two, I was conscious about being more of a mediator for the students' learning process, standing back and allowing them to construct and co-construct knowledge amongst, and by, themselves. This seemed to be a success as I observed many students helping each other, asking each other questions about how to create their texts. Allowing, and mediating, their negotiation of meaning with each other appeared to be the most effective example of overt instruction during the study thus far.

It is interesting to note the difference between the two days, particularly from a pedagogical perspective. As mentioned, there were concerns about the extent of which I was to scaffold their learning on Day One, but it was much easier to be a simple mediator and not stand

in the way of their learning, so to speak, on Day Two. One reason this might be is that they were busy working on, and thus, creating or producing. On the first day they were in the passive learning mode³¹, consuming texts and discussing them. Yet, on the second day, they were actually creating them, and not in the abstract (such as brainstorming or inventing an idea for a game), but actually using a software to create them. This was arguably the most engaged and active they seemed throughout the whole semester.

4.6.1 Critical Framing

Given that critical framing allows students to explicitly critique and apply the theory seen in class, particular literacies this week did indeed point towards students' reflexivity about some of the theory discussed throughout the course and its application in these digital texts. Moreover, students once again articulated elements of embodiment and engagement in regards to the text, and concepts such as Goal-Directed Behaviour, not initially considered when designing this study, emerged again. The data presented below derived from the focus group discussion conducted at the end of the week, as well as some responses submitted from the discussion questions on day one.

4.6.1.1 (Socio)Cultural Literacy

During the focus group, the hypertext *Surviving History: The Fever* allowed one student to articulate an interesting dynamic in regards to cultural literacy. As mentioned above, sociocultural literacy can relate to an understanding of what is appropriate and inappropriate in a given social context or community. One student implied this notion in regards to the hypertext

³¹ Of course, this is not entirely passive considering these texts are interactive. However, in comparison to what they ended up doing on Day Two, the activity of reading/playing texts seems more passive than actively creating their own hypertext narratives.

The Fever. However, he then later related an understanding of cultural literacy, that of general cultural knowledge, to the other hypertext seen this week, *Beneath Flores*:

Yeah ...same for me, like in *The Fever*, I feel like I learned more to be like the doctor culture, the doctor community. So, when you have the choice to help or not to help, like I was more like...defining the action to help the people, 'cause I was feeling that I was part of the culture of the doctor mostly. And the goal of my game in that one, it was to help, more than the other one. It's mostly about the cultural thing with the Nunavut and we like, we learned about it, but it seems to me like, a legend...like something that we...like we tell to the kids before they go to bed, that is transmitted to a generation to a generation.

The shift in the definition of cultural literacy to the transmission of cultural knowledge versus the sociocultural aspect of it, which is connected to how to act in a particular cultural community, is interesting in this student's enunciation. Despite the fact that the student had not been taught this difference, demonstrates the ways in which these texts can intuit these subtle distinctions. More importantly, this demonstrates the way one text, by virtue of its more interactive elements, can allow students to apply, and interrogate, cultural literacy and/or knowledge to a particular sociocultural site. Again, I had not considered the ways in which these two texts could contrast, particularly in relation to differing definitions of cultural literacy, thus this was a fortuitous moment. Therefore, this student's enunciation provides a salient point that demonstrates the pedagogical power of these two texts.

4.6.2.1 Multimodal Literacy

The importance of various modes in regards to the texts seen this week was indeed articulated by some students. In the responses submitted from the discussion questions, one student mentioned the importance of multimodality in regards to understanding the main character:

In [the] beneath flocs story multimodality is an important literary device. The addition of various modes, such as audio, linguistic, and visual helped the reader to better understand the context and the mood of the story. Without the audio and the visual modes, it might be harder for the reader to understand the emotions of the main character

Multimodality as a concept was explained to the students this week given that, as mentioned above, this genre of text lends itself well to an understanding of the ways various modes are at play in a given text. This student's response demonstrates her ability to apply theory in interesting ways given how her focus on the "emotions of the main character" ties to literary analysis, particularly characterization. This affordance could allow the students to better comprehend this element in other sites (digital texts), which they may encounter more outside of school, as opposed to traditional print texts.

4.6.3.1 Goal-Directed Behaviour

Goal-directed behaviour emerged again, in relation to hypertext fiction. This became evident during the focus group discussion:

I don't know, I just want like...go further in the story, well...without I don't really mind not knowing what it means, I just want to go further and like, discover different ending and we had like achievements we do, that we can reach, and I just want to have like, new achievements and if I didn't know one of the two choices I have to take, I took the other one

This student's citation reveals the power and importance of explicit and tangible goals and objectives in a text. Obviously, for this student, it serves as a source of motivation to complete the text. However, as the student states, the desire to complete goals and reach achievements seem to outweigh understanding what the story "means". Similar studies, such as the one conducted by Akkerman, Admiraal and Huizenga (2009) demonstrate this when they used a game built to teach the medieval history of Amsterdam. During the study they found that students were ignoring the background story of the game and instead focused almost entirely on the tasks to complete the game. In some ways, there is a binary that appears, between the short-term goals and tasks to be completed and the larger story that needs to be understood. Of course, the goals and objectives are part of the story, but one cannot help but feel that this is analogous to the perspective of school, mentioned in chapter two above by Ulmer (n.d.), where entertainment, play, and the experience of learning may be opposed to the 'business' of school which is to acquire grades and/or diplomas. Thus, though goals and objectives, which are often a part of digital games and digital literature, may leverage motivation, they also risk undermining the objectives of a literature course, which is to reflect on, and critically analyze, narrative.

4.6.4.1 Critical Literacy

Also during the focus group, one student provided a unique critical perspective towards these interactive texts. The student highlighted critical issues of how the narrative, and thus the interpretation of it, can be different per person:

I think it makes it complicated, because you never...it's never the same story, so it makes difficult to see like, it could be...you could think of some kind of thing, but then somebody else like just across the room that is playing the same game as you, but it's having another action or having another type of story than you, 'cause you did another choice at one point and you're going to another kind of...I don't know, point of the story. So, the theme that we have maybe won't be the same as theirs so...it would be more, like...I don't know, disturbing, 'cause one can be very dark and sometimes the other is just joy, having fun and you just try to survive at some point, so you won't have like...the other maybe don't want you to have, like, many perceptions of this game.

This is crucial in that, not only does it relate to the fact that readers no longer have a shared experience of the same narrative, but also highlights potential problems on a pedagogical level. For instance, how is a teacher meant to discuss the plot in a narrative with a variety of different hypertext plot structures? Similar issues that relate to this are alluded to below, when one student mentioned the disadvantage of not being able to see other student's oral presentation of their digital game (instead, students recorded a video screencast of their essay outline). Moreover, and on a macro, and more importantly, political level, this can also relate to how digital technology

can allow for a balkanization or tribalism of perspectives in that people only seek or consume information that confirms their beliefs and attitudes and rarely seek out opposing views (Chen & Gu, 2004). Indeed, these issues were not considered before the study was conceived and bring a unique, political perspective towards the ways they can engender a critical regard to the individuated ways people use digital technology.

4.7.1 Transformed Practice

For the transformed practice phase, students were to create hypertext narratives in relation to concepts, topics, and themes of their interest. Given that transformed practice highlights the ability of students to re-create a discourse for their own purposes, the opportunity for hypertext narrative creation offered interesting possibilities. It was particularly impressive to see the ways in which students were able to negotiate with their given topics, concepts, and themes via the required choices, and thus consequences, of the hypertext narrative genre. Moreover, this element was established in order so that students incorporate new ways of multimodal writing into the classroom, particularly those that might be more meaningful and engaging (Rowse & Decoste, 2012, p.258). More importantly, such digital narrative creation may open avenues, in future iterations or studies, towards fanfiction writing in that students may extend upon narratives seen in class in a transmedia perspective: appropriating established narratives and developing them for their own purposes (Boulay, Mroquène, & Roger, 2010; Jenkins, 2006).

Another important element of this evaluation was the application of literary terms and devices into the hypertext narrative. This was made evident by the screencast walkthrough the students performed of their narrative. As mentioned in the previous chapter, during the recording, the students performed a walkthrough of their narrative, which allowed some of them to articulate

and explain parts of their narrative, vocally pointing out which literary device they had applied to the narrative. In the hypertext narratives that students created, all of them were quite adept at operationalizing and applying these literary devices. This was particularly the case in applying the 2nd person point of view.

Because the students completed the evaluation at home, no specific literacies were observed during the creation of their hypertext narratives. Also, their screencast walkthroughs did not necessarily produce any pertinent literacies that warrant discussion here. However, it was compelling to note the ways in which students were able to dramatize, through their narratives, pertinent topics and themes that relate to their lives. For instance, two students featured the topic of technology in their narrative, as well as a critique of it. This was featured in one student's narrative where the main character was always on his phone when bad things would happen to him. Even more interesting was the application of their hypertext narratives to situations and that they had, or will, encounter in their own lives. Two separate students used a 'night out' of college partying for their narrative subject, dramatizing the consequences of binge drinking. One student dramatized a particular arduous rugby game in which she played, while two other students discussed the choices and consequences of going to university after college, with one dramatizing her difficulty in choosing whether to travel or go to university. These last examples demonstrate the ability of hypertext narratives to allow students to work through complex life choices as well as the potential consequences of them. Moreover, this ties to the importance of identity in literacy learning (Norton, 2013) including identity negotiation in game playing (Barab, Gresalfi, & Ingram-Goble, 2010; Gee, 2007) and via avatar creation (Apperley & Beavis, 2011). Through these hypertext game creations, students are able to create identities, often much like their own, and thus become self-reflexive about their lives and the choices they either have made or will

make. Thus, such reflexivity towards authentic, real world situations demonstrates the affordances these types of activities when using these digital texts can have.

4.8.1 Data Triangulation

During this week there were two elements that were analyzed via data triangulation: the students' experience of playing the hypertext games of the week and their hypertext narrative creation. For the hypertext narrative creation, I had initial concerns that students would either have difficulty creating them when using the application/software, or that students would have difficulty in integrating literary devices and terms to their narratives. My observation notes demonstrated that with the help of the tutorial, and more importantly, the students assisting each other, the former did not seem to be an issue. Also, it was unclear how they would fare in the application of literary devices. Overall, the students were quite effective in articulating these devices in their narrative and were able to use the software effectively, creating compelling and well-planned narratives. Even though their application of literary and game terms in the narrative itself was implicit, it was made more explicit via their screencast walkthroughs in which they explained where and when certain devices were applied.

The next issue was their experience of the hypertext narratives they had played on Day One of Week 2. Both narratives differed in the way they allow for information to be transmitted. For instance, *Surviving History: The Fever!* is more of a classic hypertext narrative, presenting the story via text with often two choices to advance the narrative forward. *Beneath Floes*, on the other hand, presents a narrative that does not require much choice, yet the interpretation can vary widely. Despite the fact that observation notes data demonstrated that some seemed to be more interested in *Surviving History: The Fever* than *Beneath Floes*, the focus group data revealed that

there were still some who enjoyed the latter. This was evident when one student claimed the use of second person narration made the reader/player feel interpellated into the narrative: “it’s talking at the second person so I feel that I am more conscious of the decision on me...Cause I feel like it’s happening to me”. Indeed, the use of second person narrative was an important aspect in regards to these digital texts, and though initial observations seem to suggest the straightforward narrative was widely favoured, the fact that the second text’s narration was in the second person seemed to have an impact. What is also interesting is that the data goes against other studies, such as the one conducted by Daemmerich (2007), who states students had difficulties following the hypertext, non-linear narrative she presented to her students. Perhaps given that this study was conducted nearly 10 years after, the students in my study may be even more comfortable with technology than their prior cohorts.

4.9.1 Modifications to Future Iteration

Once again, after this iteration, I realized that I needed to emphasize that it was okay to cheat and persuade students to seek out information on how to surpass difficult parts, an important aspect for information literacy. Having students search out information regarding the texts they are playing is an important skill, as they will need this skill for their digital games, especially given that many were not used to playing digital games and they could get frustrated if they had difficulties with their games. Yet, for some reason, students this week seemed reluctant or unwilling to search for information online in regards to their hypertext narratives. It could be because the texts analyzed this week were not difficult to read or complete. However, I found it interesting that students never took the time, for example, to search the meaning of the Inuit words from *Beneath Flores*. Though perhaps it is unrealistic to expect that they would seek to

understand a language that is far from the languages they may regularly encounter and have a little more familiarity with.

Again, I also noted that I needed to make better attempts at balancing the line between giving them enough information but not too much in relation to their texts. This balancing act of scaffolding became even more evident to me in that I wanted the students to experience these texts, particularly *Beneath Floes*, without ruining the game's intention. However, it was evident during the discussion after their gameplay that many students did not fully understand the game or what it was trying to communicate. Therefore, I realized that I should have done a better job of scaffolding this text.

And finally, it became evident this week that I need to focus more on classroom management, specifically in relation to making sure they are paying attention and not going to various websites online. This is important, particularly during the overt instruction phase as a lot of crucial information is given to them and they need to pay attention. All of the above considerations are represented in the below figure (figure 5).

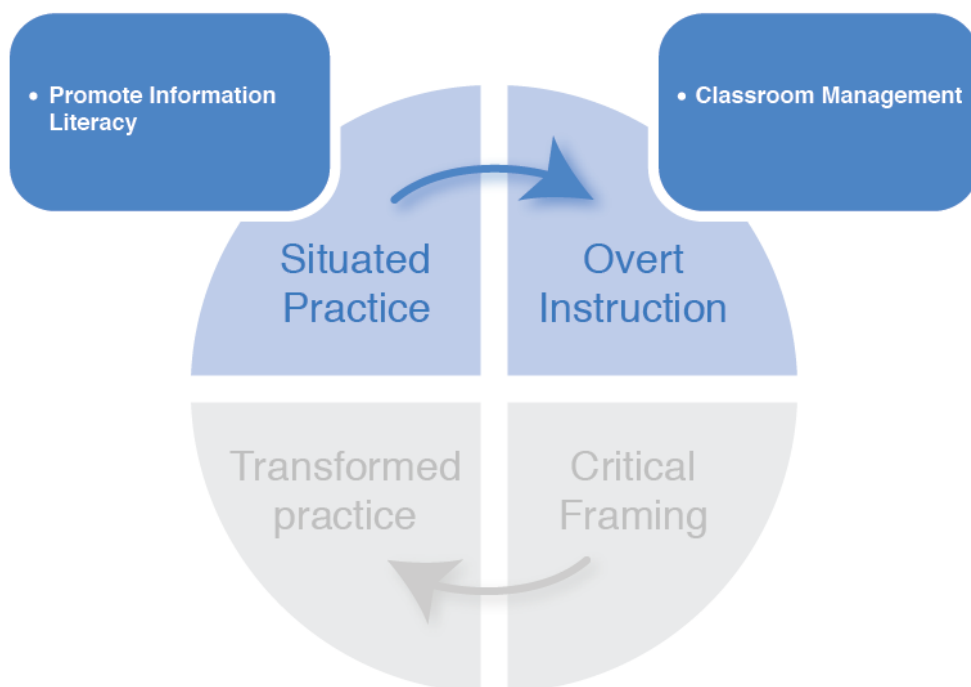


Figure 5. Week 2 – Pedagogical Considerations

4.10.1. Second Iteration: Week 2 Conclusion

At this point in the study, it had become apparent that the initial excitement and enthusiasm about this study had encountered the stark realities of classroom teaching. This is not necessarily to say that it coloured the study in a negative way, but at this point, multiple issues around the technological limitations of the computer lab, classroom management, and the teaching of these types of texts invited a number of complexities. Some of these were expected to emerge (such as potential technological problems), but I had not foreseen as to what extent they would hinder the teaching and carrying out of the study. On the other hand, a number of student articulations mentioned above, reified the belief in the possibilities of not only the study itself, but the teaching of this material.

5.1 Third Iteration: Week 3 - Hypermedia Fiction/Digital Game Theory Introduction

5.2.1. Day 1: Observation/Field Notes

On the first day I discussed hypermedia fiction along with many digital game terms to set them up for their final essay due at the end of the course. Hypermedia fiction is a genre of digital literature that, like hypertext fiction, can include hyperlinks to advance the narrative, but is also reliant on using the mouse-cursor to interact. Moreover, hypermedia fiction is perhaps most known for its inclusion of animation (often Flash) and thus is arguably more multimodal as a digital text than hypertext fiction or interactive fiction³². This evolution in the syllabus also brought us closer to contemporary digital games in the form that I imagined most students would recognize them.

As I discussed the gaming concepts and terms there was a lot of note taking; some students seemed to understand (by smiling and nodding) digital game terms such as side-scrolling, especially when I used classic games such as *Super Mario Bros* (Nintendo, 1985) as a point of reference. Thus, concepts such as quick time events, cut scenes, and other digital game terms were understood when they were tied to contemporary examples. In some ways, this could also relate to digital game literacy, though not necessarily in the sense that Squire (2008) defines it, when he situates it as “an *expertise* in designing rewarding experiences for oneself within a gameworld (particularly within the game’s semiotic and rule systems)” (p. 640), but more in line with the New London Group’s emphasis on a metalanguage that is needed to address, among

³² I am aware of the problematic nature of how I am dividing these genres of digital literature. For instance, it is possible, though rare, for an interactive fiction text to include images (visual mode) or a hypertext fiction text to include Flash animation. However, for the purpose of this study, and module, it was decided that a continuum would be established to highlight (however problematic it might be) an evolution of modes through the genres of digital literature.

other things, “the textual and the visual, as well as the multimodal relations between different meaning-making processes that are now so critical in media texts and the texts of electronic multimedia” (p. 77). This is evident for any teacher of literature that would provide literary terms for their students, giving them the tools to properly analyze and understand the devices used in literary texts. And indeed, literary terms were also reviewed (plot structure, theme, characterization) again so that students could apply them to these types of texts as well.

After my explanation of digital game terms, I presented the hypermedia text *The McDonald's Videogame* (Mollindustria, 2007) and let them play for roughly 20 minutes. Then they played *Freaky Flakes* (PBS, n.d.) after which I had the students submit a Word document of their responses completed either individually or in groups. Specifics on these two texts, particularly what occurred in the classroom during and after game play, will be discussed in the overt instruction phase below, as there are pertinent results that took place in relation to this phase.

5.3.1. Day 2: Observation/Field Notes

On this final day of the week, two hypermedia poems were presented. The two hypermedia texts were *Loss of Grasp* (Bouchardon, 2010) and *Fitting the Pattern* (Wilks, 2008). The scaffolding for the former was brief in that I did not want to give too much away about the work, but enough so that the students could experience it and understand how to play. Also, after they played, I showed them some critical commentaries and reviews that could assist in their interpretation of the text. One of the reasons for this pedagogical strategy is that it mimics the type of research work I wanted them to do for their choice of digital games, as noted in the assignment instructions (Appendix C). Thus, I used the classroom analysis of *Loss of Grasp* as a

model for how they should approach, play, and analyze their game. Students were also given discussion questions about the texts. The questions were as follows: 1) How does procedural rhetoric compare between these two games? 2) What is the main idea communicated in either game? 3) Is one game more effective in its ‘persuasion’? An analysis of these responses will be discussed below.

Unfortunately, students’ gameplay for *Fitting the Pattern* was fraught with problems. Namely, the text would not advance beyond a certain point for some students, but would for others (after some troubleshooting and discussions with people in I.T., it was evident that some of the computers were not equipped with the appropriate software). Given that only a few students (four out of 17 in attendance) that were having difficulties, I asked if they could join students on whose computer it was working, which they did. After they completed the text, I asked students what they thought of the text and what they felt was the main message. Everyone seemed reluctant to respond so I asked an individual student the same questions; she claimed to not understand what the text was about. I informed the class that the text was about the relationship between a mother and a daughter and that this relationship is explored through the digital act of cutting, sewing, and dressmaking, which reveals the narrative hidden underneath. I would have liked to further explore this theme of the game with the students; in other words, what they felt the text is saying about mother/daughter or parent/child relationships. However, because we were running short on time, I decided to finish the discussion there and gave them their assigned quiz.

5.4.1. Week 3– Literacies, Concepts, Themes That Emerged During the Week

Figure 6 presents an overview of the significant literacies, concepts, and themes that emerged during the week, as they relate to each step in the pedagogical framework. The principal data techniques that were used during this week were field notes, discussion question responses, and the focus group discussion. Upon transcribing and then examining the data, pertinent themes and concepts were noted then inputted into the grid (Appendix F).

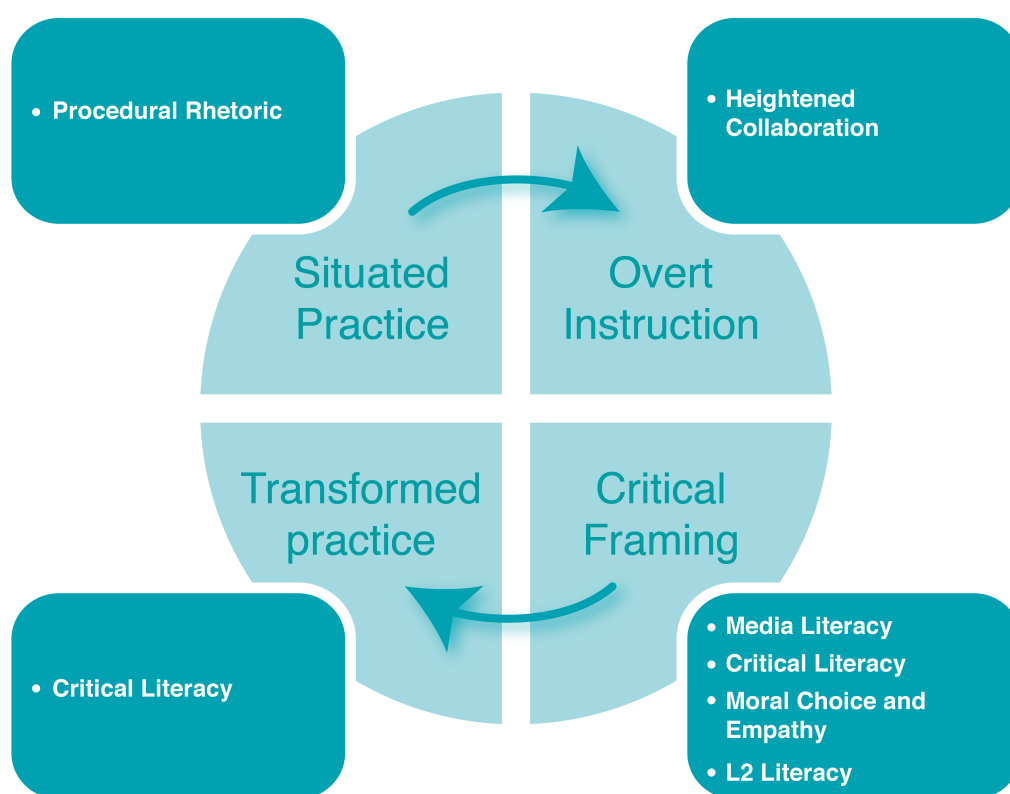


Figure 6. Week 3 – Summary of Literacies, Concepts, Themes That Emerged During the Week

5.5.1 Situated Practice

During the instructional period on day one, procedural rhetoric (Bogost, 2007), as mentioned in chapter two, was introduced. Initially, it seemed like a difficult concept for students to grasp; many students had questions about it. When explaining it through interactivity,

students seemed to understand. Also, I explained to them how one might look at Facebook, and other interactive technologies, through a procedural rhetoric lens. For instance: One might say that Facebook's 'intention' is to create a virtual social experience; one way that intention is manifest is by allowing you the possibility to 'Friend' people, allowing you to 'Like' things, etc. Thus by analyzing the interaction with these algorithmic processes, Facebook's procedural rhetoric can be realized as the intention of people to experience a virtual social environment. Though this is not in the way Bogost intends by procedural rhetoric, given that Facebook is not necessarily attempting to communicate a message or has an intention, this served as an effective scaffolding technique to talk about the concept in relation to digital games. Students seemed to understand it and this was confirmed by their responses to the discussion questions analyzed below.

5.6.1 Overt Instruction

On day one of this week, four students had already started playing the games during the overt instruction (scaffolding of the two hypermedia texts) period, despite the fact that I told the class to wait until after my instruction. Again, this highlighted the difficulties of having technology readily available for the students and how it affects classroom management. As mentioned above, after scaffolding the texts, the students first began playing *The McDonald's Videogame*. In this game, the player takes on the role of a McDonald's CEO and controls four 'aspects' of the corporation at any given time: the farmland, the slaughterhouse, the restaurant, and the corporate HQ. Through each of these aspects, players can make decisions that will affect the fate of the player's company. For instance, the player can choose whether or not to feed the cows genetically altered grain, or plow-down rainforests, or feed the player's cows to other cows with the game's goal of being profitable and efficient, while not falling into bankruptcy by failing

in one of the four aspects. This game is considered an anti-advertising game (Bogost, 2007) in that it satirizes the various practices of the McDonald's corporation. The students seemed to enjoy it, laughing out loud and showing each other various parts they had reached. Indeed, the collaboration for this game was the strongest in the study so far; students were immensely engaged and eager to see how far their fellow students had progressed. They also started helping each other at difficult moments, as many were comparing and collaborating in regards to their gameplay. Even when I wanted them to move onto *Freaky Flakes*, students did not want to stop playing *The McDonald's Videogame* (and some even continued playing it).

Freaky Flakes is a game created by the Public Broadcast Service (PBS) of the United States. In the game, players are to create cereal boxes with various advertising components to attract potential buyers, aimed at children, to their box. Thus, the game is an anti-advertising commentary, similar to *The McDonald's Videogame*, about the advertising and marketing strategies employed by cereal box companies in the pursuit of attracting children to their product. The game is much shorter to complete than *The McDonald's Videogame* (approximately 5 minutes), and after the students had finished playing, I presented them with the discussion questions and concluded the class after they had completed these questions.

On the second day, students were presented with two texts, *Loss of Grasp* and *Fitting the Pattern*. Again as mentioned above, there were technical issues with the latter. It was interesting to note that, on the onset of encountering problems, students attempted to help each other with the difficulties they were having with the text. After noticing that several of them were not able to get past a certain point, I attempted to help them, yet despite this, the problem was not resolved

and some students ended up sharing the same computers. As mentioned above, the class concluded shortly after with a quiz.

It became apparent that literacy experiences within a classroom setting, and particularly the time and technology constraints this can present, may have negative effects on literacy development, particularly at the college level. For instance, when students are continually faced with narratives that they do not ever complete because the classes are too short, or the technology used in the school causes problems, it may affect the development of their literacy skills and their understanding of literacy. Having the students complete the texts at home on their own computers could have rectified these issues. However, it may have been problematic to assume that they have the appropriate computer with updated software to view these games and thus would not have been equitable.

5.7.1 Critical Framing

5.7.1.1 Media literacy

During the focus group at the end of the first day I asked the students to compare *The McDonald's Videogame* to the documentary *Supersize Me* (Spurlock, 2004) (for the students who had not seen the documentary, I had explained the premise). We discussed these two texts in relation to how their respective messages are communicated. One of the students claimed: "I think that when the difference between the documentary and the games is in the documentary, they are bringing facts and in the game, you discover the facts on your own." This citation articulates the difference between traditional, passive rhetoric (visual advertisements such as posters, films, etc.) and active rhetoric, such as discussed in relation to procedural rhetoric.

Though procedural rhetoric was not explained in this way when discussed in class, it was interesting to see the student's implicit understanding of it as well as his explanation of the difference of these two texts.

Another element that relates to media literacy was apparent in the students' discussion questions. One student discussed *Freaky Flakes* and how this text dramatizes the strategies of marketing departments:

The decisions that marketing managers have [has] enormous impacts on the perception of the product they are trying to sell. It also shows us the main idea that the selling department companies have in mind when creating a product and the different strategies they can use.

Similarly, yet here in relation to comparing the two hypermedia texts, the response from one group stated:

The main idea communicated between the two games is how marketing plays a large role in consumerism and society as a whole. They not only sell us their products but they also have to capture and peek [sic] our interest so that we are interested in purchasing their product and this is where advertising and details come of importance.

These comments are interesting in relation to these two texts. It might be argued that these messages could be equally presented via traditional print or film media. However, one can

interpret the “shows us” in the first comment to mean that given the students interacted with the text, and perform the duties (though virtually) as marketing managers, these message are more impactful given that they take part in the action.

5.7.2.1 Critical literacy

Examples of critical literacy were indeed articulated this week by the students, which is not entirely surprising considering the thematic issues in the hypermedia texts they played. Comments, such as the following, emerged from the student’s discussion and highlighted the students’ awareness of various complex ethical practices involved in the fast food industry: “The McDonald game [...] forces you to be a part of the game and to reflect and take big decision[s] to keep the company going”. Later this student discussed the intention or main idea of the game, which is “to have a point of view of the work behind the final product what is going on behind the production of the hamburger. There is the agricultural sector, feedlot, fast food and headquarters. There are many sector[s] to help the player understand and interact and see how the business goes”. In both instances the student identifies the affordances of the game be it reflection or interaction and how various corporations and their antecedent discourses of power converge to make the business ‘go’. Indeed, as another student claimed, *The McDonald’s Videogame* provides a unique perspective for the consumer that is understood through process: “Following so many steps this attentively makes us as consumers, realise that there is more to this whole process then we may have realized”.

5.7.3.1 Other themes/categories that emerged: Moral Choice and Empathy

Moreover, the pressure to make a moral choice and its connection to empathy allowed students to contemplate their decisions when playing as corporate avatars. This emerged during

the focus group when one student claimed:

I think the fact that we had choices to make, well not really ‘cause like, we are push[ed] to make those choices, makes us, like, feel more of like, that it’s wrong, that there’s something like...more than if we talk about it or if we saw it in a show that they act like: ‘I’m killing a cow cause, like, it’s gonna make every[one] sick’ or like, that ‘I’m kind of destroying the rain forest’, like...when I click on the buttons, it makes me, like...understand more, I think.

Furthermore, another student claimed:

Like, we see more of it in McDonalds when there is like, theses alarms and you say: ‘Oh, these ecologic groups are criticizing what you are doing’ and really feel, like, an impact...like, the choices we make have an impact, like a negative one. I think that’s what makes you reflect, like, if nothing would ever happen in the game, like, you do your things, you get money, but there is no feedback of your actions, we reflect less I believe.

Interestingly, students articulated the significant empathy-inducing elements present in interactive texts. The development of empathy via digital games has gained recent interest by scholars (Farber, & Schrier, 2017; Roussos 2015; Roussos, & Dovidio, 2016; Sampat, 2017) eager to highlight how digital games can perform as “empathy machines” (Farber, & Schrier, 2017) given their unique ability to allow players to ‘inhabit’ characters and enact their actions. Empathy, specifically its ability for students to develop a critical regard towards how corporate power is implemented, dramatized through certain texts, was indeed present throughout the study.

The emergence of empathy was also identified as a criteria for the efficacy of the hypermedia texts. One student claimed:

McDonald's was more effective [than Freaky Flakes] since it put us in really difficult situations where you have no other choice, but to use immoral decision[s], all of this to make money. It really made us feel bad and lose at a certain point, if the actions weren't made

Moreover, students were also adept at tying to procedural rhetoric and multimodality:

The McDonalds game was more persuasive than the Freaky Flakes games due to the amount of participation and attention we needed to give it, in order to keep the whole farm functioning. Following so many steps this attentively makes us as consumers, realise that there is more to this whole process then [sic] we may have realized.

Similarly another student claimed:

The McDonald's game is more persuasive in some way[s] because there are more interactions that you can make. It shows us all the different ways that someone who owns McDonalds has to go through. No matter which way you go there will always be stress, bad decisions to be made and there is no way to avoid them making the McDonalds game the best game to show us the negative impacts that is happening in the advertisement world.

Again, many comments like the ones above underscored the effect moral decisions, and ultimately, empathy had via these digital texts.

5.7.4.1 Goal-Directed Behaviour

Interestingly, goals and goal-directed behaviour emerged again, particularly the difference in goals between the two hypermedia texts. This was discussed in one student's discussion production:

The McDonald's game is more a game that you have to think more about the actions that you do. Each steps [sic] will have a direct impact on the game. For the Freaky Flakes game, it's pretty straight forward: There are a few easy questions that you have to answer in order to make the box of cereal good. You can't lose in this game.

Once again, it seems that the importance of having clear objective goals in an interactive text was an element that appealed to some of the students. Moreover, the student criticism in regards to the simplicity of *Freaky Flakes* in that it does not include a clear end or fail state demonstrates a reflexive critique towards how certain digital games function.

5.7.5.1 L2 Literacy

L2 literacy also emerged as a productive element in relation to the assigned hypermedia games. During the focus group discussion, a student discussed hypermedia texts in relation to ESL learning, stating that:

Yeah I think I learn a lot by association, so I would watch show[s] in English with like, French subtitles and say: ‘OK, they are talking about that, that’s the ‘burden’...I think I saw that in a game, like, they made terms and also the fact that you are playing, that you are involved makes you reflect, you are more focus than maybe if you were just reading. Like, sometimes I just...like I see words but I’m not really reading, I’m not...So if you are playing, you kind of have to be involved.

What is interesting here is the aspect of multimodality and interaction that the student mentions. Watching films and television shows with subtitles can be an effective way for people to learn a language (King, 2002; Rokni & Atae, 2014; Whatley, 2012). Yet, the added aspect of interaction seems to have brought a more meaningful experience to this language learner. Thus, given both interactive and multimodal affordances digital games and digital literature provide, their importance for language and literacy demand consideration and further investigation into their potential.

5.8.1 Transformed Practice

For this phase, I asked students on Day One of the following week (as there was not enough time on Day 2 of this week) to come up with ideas for their own hypermedia game. This was proposed via three discussion questions (How would you create an anti-advertising game, such as *The McDonald’s Videogame* and *Freaky Flakes*, and what would it be about? How would you use multimodality? How would you use procedural rhetoric?). Below are pertinent citations that emerged from each groups’ documents which articulated examples of critical literacy that connect to concepts such as multimodality and procedural rhetoric.

5.8.2.1. *Critical literacy*

Interesting examples of students applying a critical approach to their own texts were evoked in the following citations. A student from one group claimed:

I would start to cho[o]se a topic that touch[es] many people and that it concerns a lot of people. Some companies are hiring young people that they pay less then[than] it supposes[sic] to. For example, some big companies have people working for then many hours a day with not enough breaks, etc. It should be clearly illegal but it is not yet, in 2016. The players would play the roles of the children who work many hours a day illegally. The player would feel how it is exhausting to work at these factories and that it should be banned. The player could realize through the game that it makes no sense to obligate children to work like that.

This group further added the role of multimodality in their text: “I would use more than one multimodality [mode] to put an emphasis of the problem in the game. For example, the game could be a factory which there are children working many hours for a big company. We could use the audio to emphasizes all the noises that there are in the factory”. Another group also indicated the topic of exploitation:

The game would be about a clothing company in which the player is the manager of the store, the player has a variety of choices to make regarding budget and hiring of people ex: the player has the choice of outsourcing in which he can hire children from other countries for low wages or he can hire people at a minimum wage in

developed countries. The player will only be successful when outsourcing, this will make the payer understand big companies are successful when exploiting people at low wages.

The group effectively tied this topic to multimodality and procedural rhetoric by stating:

In the game you would see children working in clothing factories looking tired, malnourished, poorly dressed. Also children crying and demonstrating the money they received working 8hours, 12hours [...] The player will probably start by taking minimum wage individuals which with the progression [in] the game the player will start to [lose] a lot of money due to the employee's salary and this will lead the player to hire children in order for the profits to go up and have success.

Finally, one group used the topic of medication and the pharmaceutical industry:

Our game would be about medicine. As we all know, medication is tested before humans can use it. It is often tested in laboratories on animals such as chimpanzees. Just like in the McDonalds game, we would need to manage different "station[s]". First, we would have a field with chimpanzees where they grow up and reproduce themselves. Second, we would have a laboratory where we test the medication on mature chimpanzees. If some chimpanzees would appear to have side effects of the medication, they would be isolated from the "healthy" chimpanzees in a type of hospital (another place to manage).

This group included an effective use of multimodality:

We would have visual modes, the game would be set on a map, you would have your field with chimpanzees open and your laboratory. As the game go[es] and you produce medicine, you would come to a point where you can open your first pharmacy. Also, as your number of chimpanzees is increasing, you would need to open an [sic] hospital to treat the chimpanzees who are sick. Furthermore, in your first pharmacy if you are selling enough medication and you are making enough money, you could open more pharmacies to increasing your revenue [...] The audio mode would consist of having chimpanzees sounds everywhere except in the pharmacy.

Overall, the students' examples demonstrated their ability to re-create a discourse for their own purposes and to integrate it in contemporary sociocultural contexts and sites. This activity could have been even more interesting if it were further developed with storyboarding to allow them to develop the visual aspects of their game, but unfortunately there was not enough time to add this element.

5.9.1. Data Triangulation

The data sets that were the most pertinent to triangulate for this week were the students' groups discussion productions, observation notes, and the survey. As mentioned above, the students were presented with many digital game terms and analytical concepts such as multimodality and procedural rhetoric. Despite the fact that students seemed to understand them, it was not until the students' discussion production that they were able to demonstrate their rich

understanding of these concepts, particularly in how they applied them to their game ideas. However, this was not the case for all students, as some demonstrated difficulty with the concepts when I evaluated their quiz. Thus, I decided it would be worthwhile to revisit these concepts in the following week.

5.10.1. Modifications to Future Iteration

The McDonald's Videogame and *Freaky Flakes* were successes in that many students seemed to understand procedural rhetoric quite well when explained through these texts, despite the fact that the concept was quite elusive at the beginning. The idea of rhetoric being procedural, interacting with it, and in some ways, allowing players to 'embody' characters and feel empathy, was an interesting point for students to consider and reflect upon. Empathy in digital games is not something I had considered and once it emerged from students' discussion (particularly in the focus group and discussion production) it made me realize how powerful an element this could be to harness in education, particularly in English and Humanities courses. I decided that I should emphasize it in future iterations, and that it could be further examined future studies and teaching.

Given that the last week focused on their infographic poster creation and a brief return to digital games (preparing them for the final evaluations), I also decided that procedural rhetoric needed to be emphasized a little more so that students could reflect upon it more, particularly those who had difficulty with the concept, so that they were able to apply the concept in to their own analysis of their games. This is illustrated in the below figure (figure 7).

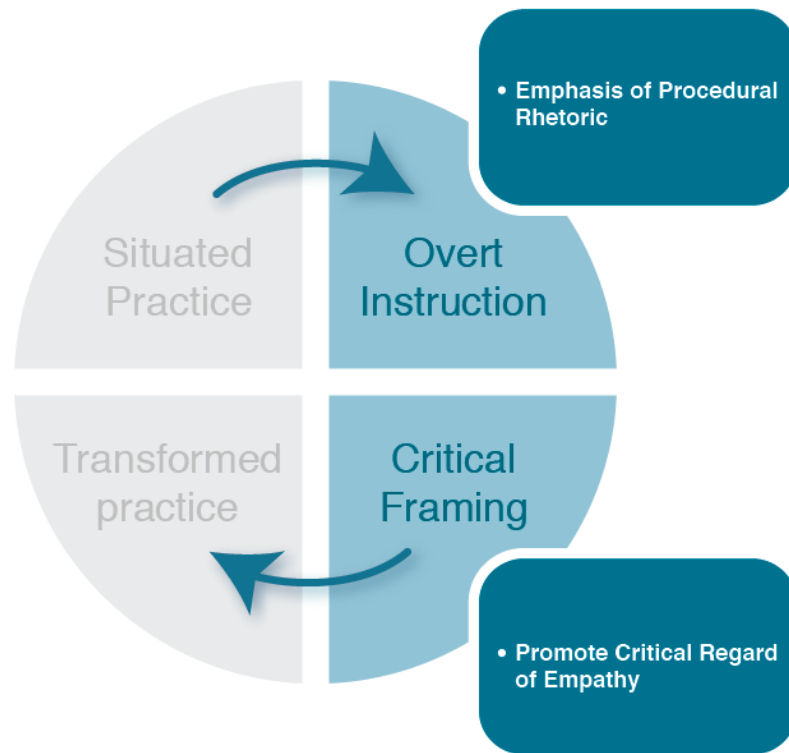


Figure 7. Week 3 – Pedagogical Considerations

5.11.1. Third Iteration: Week 3 Conclusion

The richness of students' hypermedia game creation suggestions was perhaps the most surprising and fascinating element of this week. The students' creativity in developing games around particular discourses and values was astonishing. Having the students continue to work with their ideas, either by storyboarding their games or by having them create basic games using software such as *Twine* or *RPG Maker*, would have been interesting, yet would have required too much time and would not have been possible in the current model of the course. However, this does provide great ideas for future iterations of a study such as this one, or even possible courses that used the same type of material.

6.1. Fourth Iteration: Week 4 - Digital Game Conclusion/Preparation for Final Evaluation

6.1.1. Day 1: Observation/Field Notes

This final week consisted of only one day. Unfortunately, I was extremely ill and not able to teach the second day, therefore that class was cancelled. On this final day, I began with having them complete discussion questions in relation to the hypermedia texts we had analyzed the previous week (these were discussed above, in the week prior for transformed practice). This also allowed me to return to the concept of procedural rhetoric, as mentioned in the previous week's modifications to future iterations, and I emphasized the fact that they apply this term to their chosen games. After this, I reviewed some gaming concepts that I noticed some students expressed having difficulty with, such as multimodality. Following this, I discussed the requirements for their infographic poster (Appendix H), their final essay (Appendix I), and gave them the time to start working on their poster in the computer lab. Students seemed to understand the evaluations, though upon asking them if they knew what an infographic was, three students said they did not know. I then asked them to search 'infographic poster' in Google images, or to look at the examples of *Piktochart* (the application they were to use to create their poster); after this they appeared to understand. However, it is still interesting to see that students, who are in front of computers, and are still hesitant or unclear about what certain things are, do not look online to see what these things are, despite the fact that they are often on their phones or using other devices. Perhaps they use their phones for only specific applications such as chatting with their friends, but not to seek information to respond to questions or for other uses. This point emerged often throughout the study, such as when L2 learners would rather ask each other what a

word meant³³, instead of searching an online dictionary, or when students would not search walkthroughs and cheats despite being encouraged to do so. These points will be further discussed in the following chapter.

After the class, I conducted the final focus group and it was immensely productive. I organized this final focus group's theme to be a wrap up of the previous four weeks, as well as a recap of the genres of texts that were analyzed each week. Below, themes and literacies that emerged from this final focus group and how they relate to situated practice will be presented, as the majority of this last focus group focused on how these different genres of digital texts related to their current practices. Following this, I will present some of the themes and/or literacies that emerged from the students' essays, the final focus group discussion, and the digital game walkthroughs, specifically in how they relate to critical framing.

6.2.1. Week 4 - Summary of Literacies, Concepts, Themes That Emerged During the Week

The following figure presents an overview of the data presented throughout the framework, as they relate to each step. The principal data techniques that were used during this week were field notes, the focus group discussion, the digital game walkthroughs, and the student essays. Upon transcribing and then examining the data, pertinent themes and concepts were noted then inputted into the grid (Appendix F).

³³ This also presents an interesting example of sociocultural language learning in that, for a variety of reasons (simplicity, preference of a friend's translation), students prefer asking each other the meaning of a word rather than look online on the computer directly in front of them. Furthermore, it relates to Chik's (2014) discussion of novice game players asking their immediate social circle of family and friends for learning support.

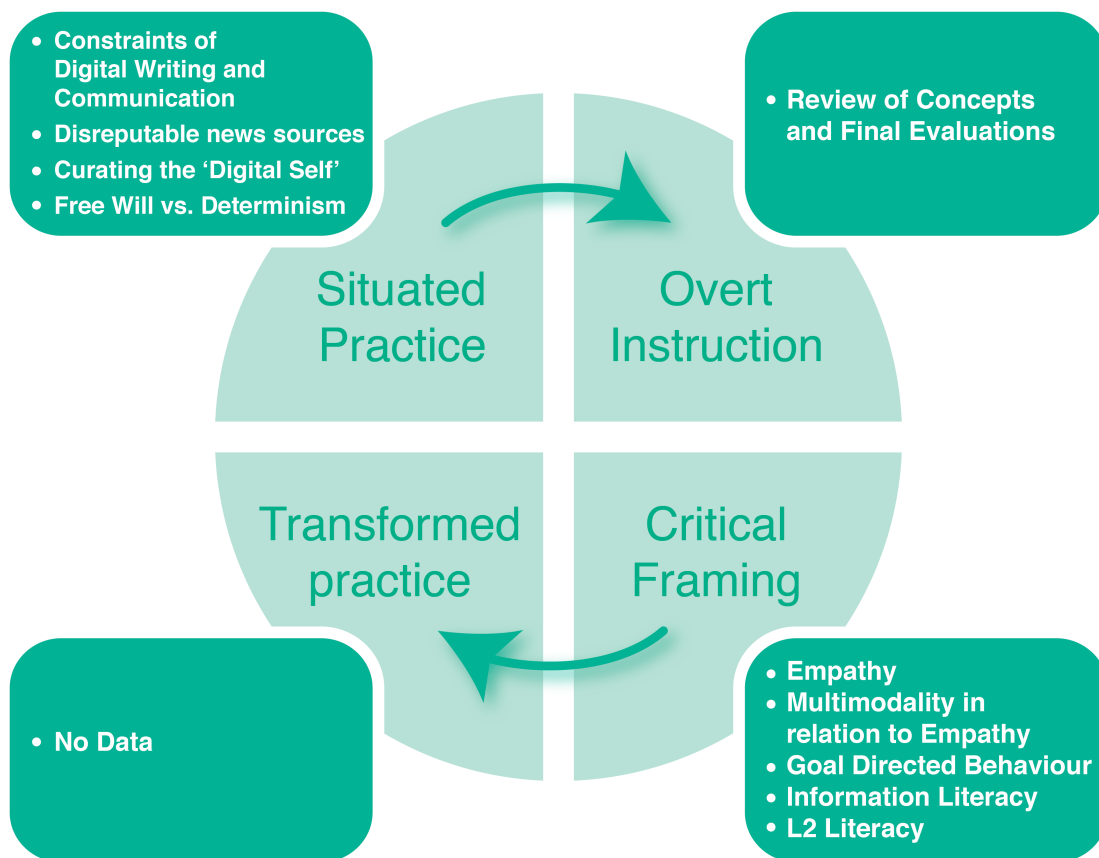


Figure 8. Week 4 - Summary of Literacies, Concepts, Themes That Emerged During the Week

6.3.1. *Situated Practice*

6.3.1.1. *Interactive fiction in relation to their practices*

In the review the students had engaged with over the course of the module, we first started with interactive fiction. I asked how this genre of text might relate to their digital practices. The following responses were interesting: “The only thing that I can come up with is texting...’cause it can relate. You text or...you can even say directions to go somewhere, it’s like the same thing and explaining something like...the person can visualize it...if you explain it well. So...texting”. Another student confirmed this, also adding the lack of multimodality was a

hindrance: “Yeah, ‘cause you’re kind of limited in what you are saying ‘cause you’re just writing, you don’t see the emotions”. I found these comments interesting, particularly in how they relate to how one must interact with this genre. In other words, as the students imply above, it is extremely important to be precise or take particular care in writing what you want to communicate. Indeed, this is important in interactive fiction as the text requires precise commands and any error in writing or word choice creates a breakdown in communication. Yet, on the other hand, even though the students in this focus group were aware of this fact, it did not seem to stop them from being frustrated when they were playing and having difficulties advancing the narrative through this very discriminating interface. In the same vein, one student in the group made an interesting connection between interactive fiction to a contemporary form of technology: “This game is like, when you are talking to ‘Siri’. Siri, you have to tell her, like, specific things, otherwise, she doesn’t understand”. Again, the students’ discussion about interactive fiction’s specific command interface and its relation to contemporary technology was fascinating, particularly how they were able to connect it to their everyday practices. Such a perspective reveals interesting paths for pedagogy in that, in the teaching of this genre of text, explicit questions and discussion prompts can allow students to be reflective about digital writing and contemporary communication practices, particularly those that involve artificial intelligence like Siri.

6.3.2.1. Hypertext fiction in relation to their practices

An interesting point emerged when talking about hypertext fiction and the use of hyperlinks in news articles, blogs, and sites like Wikipedia. I asked the group what they thought of how hypertext fiction, through a series of links, can bring you to a much further place than the site or link you started on. One student then said: “it like... it’s not getting more information, like

we are not discovering more about like...a topic, we're just getting further in the story". Information literacy emerged here as a theme, even more so when this discussion led to the reputability of sources. This came about after I asked them how they knew if they had gone 'too far' and are no longer clicking on reputable links when searching online. One student responded: "You can verify that very easily if you just, like, when there's a shocking information I think it's not true, I can just type it on Google and...like more reliable sources will appear if it's an actual information". Another student confirmed this idea, stating: "Or, often seeing the same information from different sites, this can prove, like, it's...you can base yourself on that". As was mentioned during Week 2, the dispersed form of hypertext fiction reading mimics contemporary ways of reading. Yet, the students' reflexivity on going far down the digital 'rabbit hole', arriving at disreputable links, demonstrates how this genre of literature related closer to students' digital practices and can afford them to be reflective of such practices. Clearly, this has significant implications for critical literacy in that it can actualize a critical regard toward how digital media operates.

6.3.3.1. Hypermedia fiction in relation to digital practices

While discussing hypermedia fiction, students made a significant connection between the text and their digital practices on social media sites such as Facebook. One student mentioned a moment in *Loss of Grasp* in which the reader/player is asked to type something yet different words appear on screen (this is done intentionally by the game's mechanics). The student stated:

I think that the moment you wrote and that it retype[s] everything for you, I thought that was very a strong symbol [...] like those things on Facebook or social media, like, I really control what I' m saying and what people will think about what I am

publishing and like, how I should write stuff and making no mistakes, 'cause it's very public, and it kind of reflects who I am. So, I feel like the...this pressure on what you are writing, on what you are publishing, I kind of saw it through that...like what you are writing...it's not exactly what you were...it's control and you have to...like, act a certain way.

One of the text's principal themes, evident in its title *Loss of Grasp*, is loss of control. In the text, this theme is dramatized through the protagonist's loss of control of his life via the breakdown of relationships with his wife and son. However, as was briefly mentioned in class, this loss of control can also relate to the sense of loss of self in contemporary digital media. Thus, the student's above citation in relation to others' perceptions of her on social media sites is striking. The importance of online performativity, of creating a digital self that might be separate from whom one actually is, brings to light an interesting reality experienced by many contemporary students. Cover (2012) speaks to this point when he discusses the need of an online self to function as a "narrative in line with cultural demands for coherence, intelligibility and recognition" (p.177) which may sometimes differ from the notion of their 'real' self. Again, the hypermedia text's ability to engender this experience emphasizes its relevance to students' contemporary practices.

6.3.4.1. Using different technologies in class / Their relation to students' practices

Finally, when discussing how the types of texts consumed during this final module related to contemporary texts they regularly encounter, or how these texts relate to their digital practices, a variety of interesting responses were offered. One student expressed the following:

It is more, like, [reflective of] our generation. You are less using paper, we are less, like, reading textbooks, we are looking up a lot [of] thing[s]...information on the Internet. We are doing everything with a computer, our cell phone. So I think it was more, like, reflecting to what our generation is going through.

Another student continued with this idea, focusing on the infographic poster:

It's fun, like, to put images on what you are thinking and like, to express yourself as you want, like, you put the color that you want, the background that you want, the images that you want, without putting, like, text on. I think that was interesting, but the recording part, it's interesting 'cause, me too I was less shy, but, like, you want to do it fast and...but you want to use the good word, and like...you messed up a word. You like...say sorry to the computer and just resaying what you were saying, so it's kind of strange. It's interesting.

This partial critique of having to record a screencast for their infographic poster was expanded upon by another student who mentioned how not being able to see the others' presentation was unfortunate:

I think what I would [have] liked also is having information about other games, 'cause some seem very interesting, like, I had difficulty picking up, like, picking one, I was like, I had liked [to] play this one, the other one, and at the end of the class I didn't have, I have a little now, but I didn't have information about the other

games, which I would have if we would have shared as a group. That I would have liked.

These last two citations are interesting and, for myself, quite surprising. Having the students not have to give oral presentations in front of the class, but rather, record themselves online seemed to me to be a preferable option, given that many students are shy to present in front of a class, especially second language learners (both of the students discussing this topic above were second language learners). However, as these two students relate, recording the screencast was not as positive an experience as I had thought it would be, and more importantly, removed the social element of seeing each other's presentations and being exposed to the other students' games. Indeed, here the students were able to articulate a critical stance towards technology's role, particularly in the classroom, which was not considered in the creation of this study. The criticism that technology removes us from face to face or social situations is nothing new (Turkle, 2011), yet is important to consider when integrating digital applications in the classroom.

6.3.5.1. Digital games in relation to life

Another theme that emerged out of this final focus group meeting were the connections made by students in how agency versus determinism is dramatized in these digital texts and how that dramatization compares to real life. For the students, the games they played mimicked authentic, real life choices and situations (similar comments were made by one student in relation to his hypertext narrative creation in Week 2, see above). Yet, in their analysis of games, particularly evident in the screencast walkthroughs while playing their game, students touched on how even though one has choice - the outcome ends up being the same: "even if you make the choice, you still go to the same place or this person would die anyway, just...I think I can relate

this to our lives [...] Sometimes you think that this choice will bring a different outcome, but it brings you in the same direction”. This also emerged in another student’s screencast walkthrough: “Here we have choices between three options. So we can kind of control discussion and we have power over what is going to happen later. But it doesn’t have necessarily an impact”. The students’ citations articulate an element that has been explored by digital game journalists (Favis, 2015; Simpkins, 2017; Amini, 2017) and digital game scholars (Tanenbaum, & Tanenbaum, 2009) in that choice in digital games is inherently an illusion. However, students’ ability to reflect upon this element in relation to their own lives presents opportunities to expand on important discussions for these young adults, especially considering the significant point they are in life. Once again, such reflexivity points to an aspect of critical literacy in that they were able, via these digital games, to interrogate determinism and thus the power dynamics implicated in having to make certain life choices.

6.4.1. Overt Instruction

There is not much to report in regards to the overt instruction phase for this final day. Given that one of the classes was cancelled that week, and only a small amount of class time was used for instruction. As mentioned above under this weeks’ Day 1: Observation/Field notes, this included the following: having them complete discussion questions in relation to the hypermedia texts we saw last week (these were discussed above); returning to the concept of procedural rhetoric; reviewing some gaming concepts that I noticed some students had expressed having difficulty with, such as multimodality; discussing the requirements for their infographic poster (Appendix I), their final essay (Appendix J); and giving them the time to start working on their poster in the computer lab.

6.5.1. Critical Framing

Many instances that fall under critical framing occurred when analyzing the student essays and their screencast walkthroughs. Below is an overview of some of the recurring themes and significant moments of the students' analysis from both artefacts. Their analysis reveals an understanding of different aspects of literacy, literary sensibility, and conceptual literacy that were sought objectives in the course.

6.5.1.1. Empathy, embodying characters, and the complexity of moral decisions/ethics

Again, a major theme that emerged is empathy including the embodiment of characters; in other words, the students experienced great empathy when pressured by the game to make decisions, choices, or identified with the emotions the characters experience. This emerged during the focus group and was corroborated by students' essays:

I really like my game; I got *Gone Home*. It was very good, like, the way that the game is made, like, you don't...'cause basically there's paper everywhere in the house and if you want to find out more about what's going on, like you have to read it, it's very interesting, like it forces you to read if you want to understand what's going on. [...] and the way that they express their message too, like, the way you find out about the sister, I thought it was really interesting. You sort of, like, have empathy for the character, I find.

This comment was reiterated in the same student's walkthrough when she said how the game is very 'subjective' in that it gives the player a first person perspective on dealing with

homosexuality within a family. Similarly, one student mentioned how their game, *The Walking Dead* “undeniably conveys that morals and ethics are truly tested when put in extreme circumstances that force difficult decisions to be made based on what is right and wrong”. The ethical and moral consequences of decisions made within this game have been discussed by some (Smethurst, 2015), particularly in education where one instructor in particular, Tobias Staaby (2015), conducted an informal study, more of a reflection on practice, using the game to teach ethics. Though no explicit methodology or data collection techniques are mentioned, Staaby’s anecdotal evidence points towards the game having a strong impact on the students.

The concept of choice and being forced to make a decision within a limited amount of time seemed to affect one student in particular when analyzing their digital game. In his essay, he discussed the game mechanics, and connected this element to real life:

Therefore, when we have to choose rapid thought decisions, it shows how in real life it would be too. Moreover, rapid choices impact our choices because sometimes we lack time to choose carefully what types of impact we want [...] Sometimes no choices are better, like in real life, because in the end some persons will die and you can’t help all of them.

Thus, one of the game’s mechanics, such as limiting the player’s amount of time to choose, had a significant effect on this student. Their reflection on its similarity to real life is congruent with what other students’ said above in relation to choice.

6.5.2.1 Multimodality as factor for embodiment and empathy

Beyond game mechanics, other formal elements also afforded students feelings of empathy and/or embodiment. Indeed, these affective elements were highly dependent on the efficacy of the games' multimodality, for instance. As one student's essay about *The Walking Dead* mentions:

The game is made to be as realistic as possible now that consumers expect so much from technology, and to keep users entertained, the use of multimodality helps provide an intriguing factor to the game [...] The actions of characters can be very graphic, therefore adding intensity to the game, enabling users to feel more involved and connected to what goes on throughout the process of the video game.

The Walking Dead, as the student implies, relies heavily on very graphic, visual, linguistic, and audio modes. These modes are particularly effective to make one feel more involved, and thus emotionally attached to the game and its characters, demonstrating the efficacy of empathy and embodiment.

Other games, such as *Gone Home*, also rely upon multimodality for similar affective elements. In her essay's analysis of the game, one student claims:

The multimodality of this game helps setting the tone of the digital game 'Gone Home'. Outside of the house, there is a storm going on, rain, lightning and wind can be heard from the inside of the house by the player. As the tone of the story is

melancholic, these sounds reflect this tone perfectly. It matches Sam's feelings that are expressed throughout the game. Sam's voice tone has also been chosen wisely by the developers of the game as it is clear that a feeling of helplessness is expressed through her voice. These sounds help express the difficulty of being homosexual in the 1990s.

Analyzing another game, *Her Story*, one student was able to tie plot structure, the topic of technology, and multimodality to a unique reading of the game's meaning. The student used both formal and thematic elements to combine them in a particular reading that gets to the core of the game's message:

In a certain way, the difficulty players might have to understand this complex storyline could be a mirror to the difficulty the general population has to understand mental illness [...] The fact [that] the game mainly happens through an old search engine is what allow[s] the plot structure to be so complex. Furthermore, the old and inefficient search engine could represent that the fears and judgments about mental illness should be now part of the past.

This citation highlights some of the impressive analyses students were able to make in their chosen games. Granted, this did not occur for each student but that is not necessarily the point. Rather, the selected analyses show how these texts can afford a multitude of literacies and self-reflexivity about technology. In other words, these texts can serve as convergent texts, in that they provide the possibility to engender a variety of literacies, self-reflexivity, and can communicate a number of topics and themes that are experienced via interactivity.

6.5.3.1 Goal-Directed Behaviour

The theme of goal-directed behaviour came up again, this time in the students' essays. This time, however, one student articulated goal-directed behaviour in relation to ethics in the game *The Walking Dead*:

Either by reaching another level or by getting the little mention of success in the bottom right of the screen, the player is emotionally compensated for his good play. The notion of achievement is important in a game of that kind since it helps the progression of the plot, and encourages the gamer to keep going. This idea of reward, as in real life situation[s], pushes an individual to act for the best of himself and his peers, and take decisions in order to accord the most benefits for the most people. In moments of vulnerability and danger, when people know what are going to be the impact of their decisions on themselves and the people surrounding them, they are more likely to act for the best of all, with ethical reasoning.

This student articulates an interesting philosophical confluence about ethics, goal-directed behaviour, and game mechanics. What is significant is the student's discussion of the advancement of the plot, and achievements, which are separate, though intertwined in particular ways in these types of texts. In other words, whereas someone may be reading a book for the goal of getting to the end of the narrative, completing a game is a little more complicated. Indeed, the player wants to get to the end of that narrative, however, there are often side quests, points, achievements, or a number of other elements to entice the player throughout game play and can afford more empathy and embodiment.

6.5.4.1. Information Literacy

Finally, in four separate student walkthroughs, the concept of information literacy was touched upon. One student mentioned that she needed to use online forums and articles that she read to help interpret her game, *Gone Home*. Another student mentioned watching a YouTube video walkthrough to figure out how to get past a difficult point and another discussed having to use a walkthrough to decipher what to do at the very beginning of their game, *The Walking Dead*. One student also mentioned having to search online to find walkthroughs for a difficult part of the game, *1979: Revolution*. It was intriguing to hear that some students had taken up my suggestion to seek out ways to get beyond difficult parts of the game. Though the students did not mention which sites they visited and how they found or chose such sites, the fact that they had gone online for help was significant in that they were articulating, at a basic level, a fundamental aspect of information literacy. However, more data would have been pertinent as to why and how they chose such sites, as this could reveal the more complex information literacy practices. Specifically, it would have been interesting to examine how searching and reading online forums differs from traditional academic research practices.

6.5.5.1. L2 Literacy

The student walkthroughs also revealed another interesting literacy: second language literacy. More specifically, elements related to L2 teaching and learning were evident in the students' gameplay, particularly through their walkthroughs. As I viewed their walkthroughs, I noticed many students had turned on the English subtitles as they were playing their games (for those that had this option in their games). In fact, two students had used French subtitles with English audio. I found this surprising and would have thought it more effective, from a L2

learning perspective, for the students to use English subtitles along with English audio. Yet, it seems that these students preferred this method of playing. The efficacy of L1 versus L2 subtitles will be further discussed in the next chapter.

6.6.1 Transformed Practice

The plan for Wednesday was to have them brainstorm their own digital game and that the data from this brainstorm would be used in the transformed practice phase. However, given the cancellation of Wednesday's class, the students did not have the chance to complete this activity. Thus there is no data that could relate to this phase, which is unfortunate, as it would have allowed them the opportunity to apply some of the theory and concepts in their own game creation (albeit storyboard versions of their games) and therefore demonstrate the extent to which they might be able to articulate a variety of literacies.

6.7.1 Data Triangulation

Two data sets that were interesting to triangulate were the focus group discussion and the two surveys. As mentioned in the pre-study survey, the majority of students were interested to play digital games and digital literature and many had had experience with these types of texts. However, it became evident in the focus group discussion, as well as the post-study survey, the texts they played in class did not seem to conform to their understanding of the types of digital games and digital literature that they had encountered previously (and that will be discussed more below in post-study survey). Indeed, the multiple sets of data confirm that students were not aware of these literary games and that some were open and excited by both the educational potential these games can provide, but also the way in which it can allow them to reflect upon social and cultural values.

6.8.1 Modifications to Future Iteration

What stood out the most during this phase was that their analyses during the walkthrough were less rich than their final essays. One of the reasons may be that the students had difficulties explaining their views/opinions/criticisms in situ, as opposed to having the time and distance to reflect on their ideas when writing their essays. This point was mentioned below in one of the survey responses. For instance, during the walkthroughs, students often mentioned how they did not know where to go in their game, or what they were supposed to do, but they also never articulated how they figured these things out despite a prompt that I had included in the Screencast Walkthrough Guidelines (Appendix C) that asks: “Are there any difficult parts? If so, how did you get by them? Did you use any walkthroughs or check any online forums, game sites, etc.)?” The walkthroughs could have been a more effective metacognitive exercise if, for instance, the students had played through a section once and then recorded their gameplay and answered questions on a second playing. However, this would have been very time consuming and I imagine some students would have ignored this request.

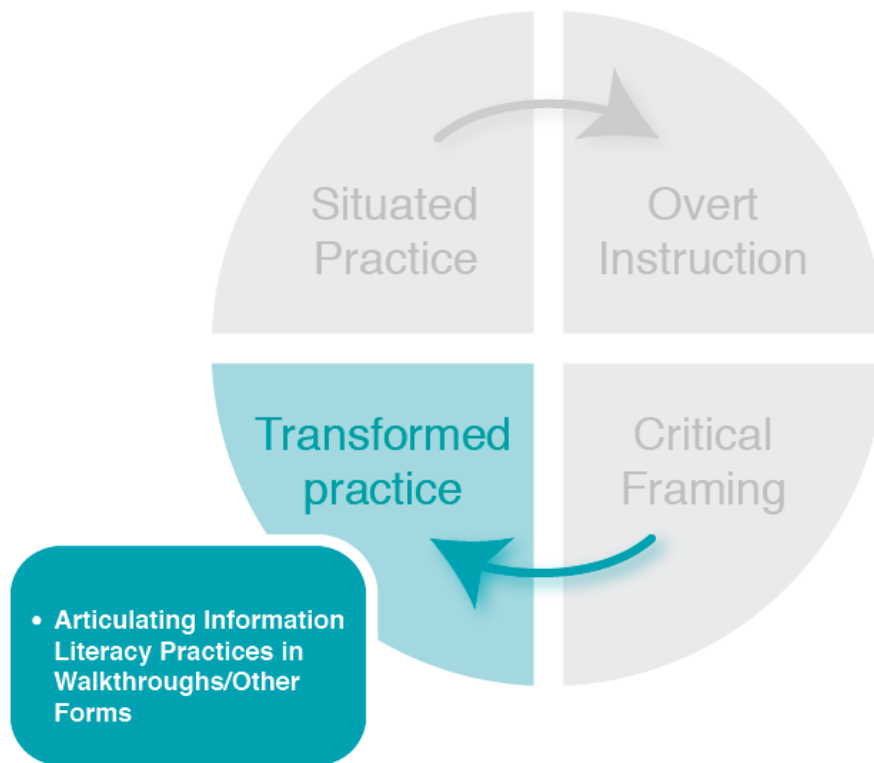


Figure 9. Week 4 – Pedagogical Considerations

6.9.1. Week 4 Conclusion

Given that this was the end of the study and the course, there was a lot to reflect upon. At the end of this final week, the last focus group served as an excellent closure to the week and the study, allowing for a number of pertinent articulations, particularly how digital interactive texts relate to the students' lives outside the classroom. Despite the fact that this final week did not consist of two classes, the students' essays and screencast walkthroughs of their games served to provide a great deal of information about how they were able to apply theory and concepts seen in class to their chosen games. These examples allowed me to reflect upon not only the multiliterate articulations these types of texts could provide, but also how these texts could be taught in the future.

4.1. POST-STUDY SURVEY

Unfortunately, the survey was completed by a significantly fewer number of students (N=10) than the pre-study survey (N=21). This was because I was not able to secure the computer lab for the last class and thus I had to ask the students to complete the survey at home. Rather than questions, they were presented with prompts that they were to complete as open-ended questions. The following is an analysis of their responses.

4.1.1. Question 1: The most difficult aspect about the digital literature we played was...

For this first prompt, three out of the ten respondents said that the most difficult aspect was the digital game terms (one of which specified the terms/vocabulary in texts like *Surviving History: The Fever*), two mentioned the interactivity as being difficult, two found the texts confusing, one mentioned the explanations of what to do for some of the classroom tasks, one mentioned the difficulties of recording the walkthrough and playing, and one student claimed that it was not difficult.

4.2.1. Question 2: The most interesting aspect about the digital literature we played was...

Four students said that the most interesting aspect was the application of literary devices and terms to digital literature, three mentioned how these texts are different than the usual texts they encounter in the classroom, one mentioned it was entertaining, one claimed that they were dynamic and interactive, and one last student said that they enjoyed the different types of games and how they are made.

4.3.1. Question 3: The most interesting aspect about the digital game I chose was...

Again, in their responses, three mentioned the most interesting aspect was interactivity. One student mentioned how a hypertext narrative can fit into a zombie game, one stated how they could relate it to a TV show, one stated how games could be discussed in educational contexts, one discussed the surprise of playing a game about Little Red Riding Hood (a reference to the game, *The Path*), one stated how they enjoyed learning how to play and advance to different levels, one mentioned learning about the context and message of the game.

4.4.1. The most difficult aspect about the digital game I played was...

Three mentioned that they had difficulty figuring out where to go and how to advance in their game, with two of these students claiming that they had to look on the internet to find out what to do. One mentioned the interactivity, another said that they were not a fan of violent games, so the interest was not there, one mentioned playing on a slow computer, another stated killing zombies and two claimed that there was nothing that they found difficult. One student had an interesting response:

Having to make decisions within a couple of seconds. I was not always able to think about the choice I was making but rather what seemed most appropriate on the moment as time was an issue. [H]owever, the author made the game this way to make us realize how some important decisions must be taken very quickly due [to] the severity of the situation.

4.5.1. By learning about digital literature and digital games, I realized....

The responses followed a number of general themes. Three students claimed that there was much more to gaming than previously thought, while two students brought up once again that games could be a way to learn. One student stated that: “it surrounds us everywhere in our everyday life” and one student claimed: “I realized that literature does not always have to be written on paper. I learnt that there are many types of literature that are offered other than short stories and book[s]. All have different purposes[,] however, they all have common aspects”. Similarly, another student claimed that: “Video Games do have a literal aspect to it, in some games you have to read attentively to really grasp what the story is!”. Finally, one student stated that they are not a gamer and do not like gaming and one said that it was not easy and “involves a lot of thinking”.

4.6.1. Analysis of post-study survey

Once again, it was unfortunate to only have a small number of survey responses. It would have been ideal to have the computer lab so that all students present during the final class could have responded. Despite the small number of responses, some interesting themes can be observed. In so far as the difficulties for both digital literature and digital games were concerned, difficulty of play, including interactivity, seemed to be the most prominent. Given that information literacy and the ability to use cheat sheets and walkthroughs was an important suggested element of this study, this theme seems pertinent as it underlines the importance of students being able and informed as to how to surpass difficult aspects of games. However, it was regrettable, as mentioned above, that more data was not collected in regards to their online searching. The fact that one student responded to question four by saying that “they were not a fan of violent video

games” also relates to an important aspect mentioned earlier of students’ perceptions of games. Triangulating this data with the data mentioned earlier in the study demonstrates an important aspect, which is that students’ perceptions of games may have an effect on this material when taught. Moreover, one response to question five also relates to perception, when the student claimed that they were not “a gamer” and did not like gaming. There seemed to be a negative connotation to being “a gamer” for this student, and it may be the case for other students as well. Again, instructors need to be conscious of this and not be misled by the assumption that youth today are all interested and eager to play digital games in school.

Perhaps the most productive response, particularly for teachers of literature, was the overarching theme of the application of literary devices or literary analysis to digital games. Indeed, students’ responses to both what they found interesting about the digital games and what they found interesting about the digital literature they played point towards this. Students’ recognition of such texts as being literary, in some ways, validates their use in literary classrooms, especially if they did not previously hold such beliefs (as implied by some of their responses above). Indeed, some students seemed able to expand upon what one considers ‘literary’, that this need not be only reserved for the realm of print literature, such as short stories and novels. However, one must always acknowledge the difference between the modes of print and digital literature.

5. CONCLUSION

As detailed throughout this chapter, the students in the study articulated a number of literacies and concepts. Some of these literacies, such as media, technological, and digital literacy

have been discussed by digital game scholars (Gee & Hayes, 2011; Squire, 2012; 2008; Steinkuehler, 2012; 2007), thus it was not surprising to see these literacies appear in my students' gaming, discussions, and other interventions. However, the ways in which the students articulated these literacies, were significant and contribute to a still emerging body of work. Other concepts, however, like empathy, embodiment, and goal-directed behaviour were not expected when this study was initially conceived. These findings can also enrich growing scholarship in how digital games can allow students to enact, and negotiate, certain concepts and themes. All of these literacies and concepts have direct links to the objectives sought in regards to this study, and more importantly, have immense pedagogical import in a literature and/or a L2 course.

Also of importance was how the pedagogical design that was implemented served to allow students to enact some of these literacies. However, as detailed above, much would need to be improved to future iterations of the design to allow for students to articulate and explore some of the aforementioned literacies. Of particular note was the lack of opportunities for students to develop, and interrogate, information literacy via walkthroughs, forums, and cheat sites. Moreover, the persistent issue of scaffolding the texts, often occurred during overt instruction, was evidently an issue from the data collected above. Also, issues relating to technology, whether in the classroom regarding classroom management, or with reference to problems and issues surrounding its use, emerged frequently.

The pedagogical issues interrogated above during each step are presented in the figure below (figure 10). The purpose of this figure is to visually summarize all of the salient, pedagogical considerations discussed throughout the four weeks. Finally, these aspects,

including a detailed explication tying the literacies and the pedagogical design to the objectives sought, will be further discussed in the subsequent chapter.

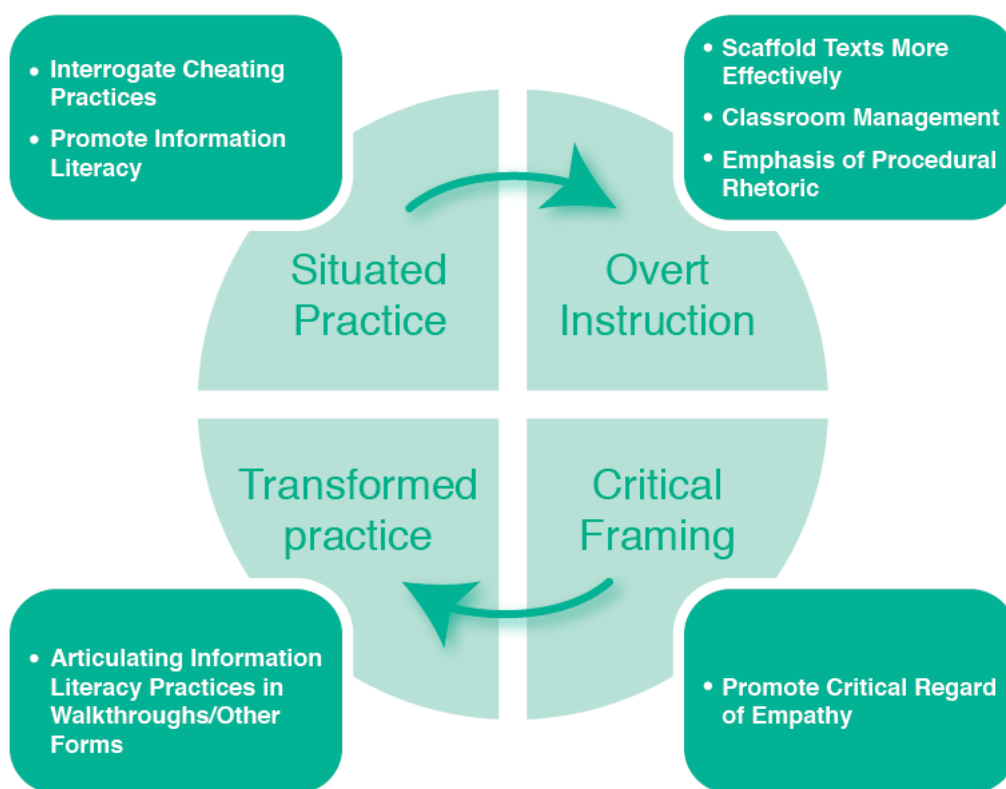


Figure 10 – Comprehensive Pedagogical Considerations of All Four Weeks

CHAPTER FIVE: FINDINGS AND DISCUSSION

The following chapter will present a discussion of the data analysed in the previous chapter. This will be done by focusing on how the data relates to the objectives presented in chapter two, but will also further interpret elements of the data in how they relate to the pedagogical framework theories, multiliteracies, theory of second language learning and teaching, as well as other theory and scholarship. Finally, a conclusion of the chapter will be presented in order to synthesize the information provided that will highlight the limits of the study, including implications for literacy development and potential considerations for further research.

1. GENERAL OBJECTIVE ONE

In chapter two, the first general objective was stated as follows: “To implement and modify a pedagogical framework while documenting the multiliterate articulations and affordances that are engendered by it when using digital games and digital literature in a CÉGEP English course”. Specifically, the first purpose of this objective was to document how the pedagogical framework was implemented, and also to document what, and how, multiliterate articulations and affordances were engendered with such a framework and the ways in which the framework could be modified to better engender multiliterate teaching and learning using digital games and digital literature. Therefore, each step of the pedagogical framework will first be discussed below, primarily focusing on the most pertinent literacies that were analyzed in chapter four and concomitant theory where applicable. Next, and this relates to the second specific objective - which is to document the ways in which such a pedagogical framework demonstrates points of convergence between students’ already established digital reading/playing practices and the ones activated during the course - the ways in which each step relates to, or allowed for,

students to make connections to their digital practices will be discussed. Following this, each section will include a brief summary of potential modifications for each step, as briefly mentioned in chapter four, yet expanded upon in this chapter, given that it relates explicitly, once again, to the first general objective. Finally, the last objective - to document specific points of convergence between L2 teaching and learning, and a multiliteracy pedagogy using digital games and literature, and the ways in which these points of convergence can be expanded and improved - will be discussed. However, before all of this, some general comments about the implementation and modification of a pedagogical design, such as the one used in the study will be presented.

1.1. Implementation and modification

As demonstrated in chapter four, the implementation and modification of the pedagogical framework adopted by the New London Group (1996) and modified for the purposes of this study was on one hand immensely productive; yet on the other hand it was difficult to operationalize, and more importantly, modify from week to week given the short time between each genre of digital literature and each iteration of the design.

Indeed, by its nature of being a structured pedagogical outline, the framework forced me to consider how to approach and implement the classroom material. Before beginning the study I questioned myself on whether the pedagogical framework should be implemented implicitly or explicitly. For instance, I considered two approaches: one was to dictate the class content by how it fit into each pedagogical step, and therefore cut material that did not ‘fit’ into each step. The other approach was to lay out the class content how it normally would be taught, and then highlight which part of the material could apply to each pedagogical step and attempt to foster

possible connections between the material and each step so that they emerged organically. This study adopted the latter approach. Though it was not considered at the time, this approach overcomes some of the critiques Leander and Boldt (2013) and Jacobs (2013) maintained in regards to the NLG's framework being constraining and overly rational. Indeed, as Jacobs (2013) highlights, implementation of the framework should be done judiciously.

Thus, during the first week, I was cognizant of interactive fiction may be frustrating for students given that it uses a particular kind of interface (typing in specific commands rather than simply pointing and clicking). Because of this, when I observed the pedagogical framework, I was conscious that specific steps like overt instruction was needed to actualize students' ability to acquire information about this text in order to interact with it, and yet that I needed to be a mediator, rather than telling them explicitly what to do and how to do it. Despite giving them a 'cheat sheet' explaining how to interact with this genre, I did not tell them how to succeed in the text and my suggestions to them about cheating included looking up hints, walkthroughs, and cheat sheets. Thus, from the beginning of the study, my relation to the pedagogical framework was an ambivalent one in that I did not necessarily allow it to dictate either the classroom material or teaching, *per se*, but used it to highlight potential points of convergence and guide the study throughout the module, again, as evidenced by my considerations when planning for interactive fiction as detailed above. In some ways, this study followed what De Castell, Flynn-Jones, Jenson, & Bergstrom, (2017) have conceived as a minimally-interventionist 'just play' approach rather than an explicitly instructional 'knowledge delivery' or 'explicit instruction' delivery which they enacted in the third phase of their study. Like De Castell et al.'s study, the effect of having more scaffolding and instruction appeared to affect the learning process better, but as discussed previously, it was still a complicated process.

Moreover, it is unsurprising that an element of ambivalence is present in an exploratory study of this nature, particularly given the use of digital, interactive texts. Despite the fact that research on digital games and other forms of digital texts is emerging, it is still a relatively new field and thus carries with it arduous challenges when transferring these texts and their concomitant literacies into the classroom. In addition, if such ambivalence appears on the level of ‘form’ and ‘structure’ of the study, it also appears on the level of content in regards to the digital texts and teachers/students epistemological framework for reception. As Carrington (2005) has argued, the shift to new digital technologies with its changing sociocultural landscapes and theoretical frames highlight the issues currently being debated in contemporary literacy politics (p.467). Furthermore, Carrington evokes Freud’s concept of the uncanny, which “speaks to the sudden unfamiliarity of the literacy practices and texts of young people around digital technologies, both in terms of the anxiety caused by the unexpectedly unfamiliar and for the increasing fuzziness of the concepts of text and literacy” (p.468). Indeed, an element of the uncanny in regards to content may also echo Biesta’s (2014) conceptualization of risk in teaching situations, an element, as discussed above, he regards as essential for critical teaching and learning. Regardless, these are all aspects that belie the desire for objective certainty typically implied in scientific research.

2.1. Situated Practice

A perfect example of the ways in which I allowed a particular step to function implicitly, rather than explicitly, was during the situated practice phase. Before implementing the pedagogical framework, making connections between the students’ digital practices and the types of texts they were to see was indeed important, hence the reason I planned to show them the episode of *Black Mirror* as discussed in the previous chapter, as I hoped this would have made a

link between the two last modules of the course (T.V. and film depictions of technology, technology via interaction). However, the connections between the types of texts seen in the study and students' digital practices emerged much more than was foreseen prior to the study. For instance, when analyzing the interactive fiction texts, students were able to make interesting connections between these types of texts and non-digital media such as propaganda posters and choose your own adventure narratives. This last one is particularly interesting given scholarship comparing the antecedent form of literature and its relation to contemporary digital games (Moran, 2018), especially in how these texts provide agency through the perception of free choice.

In regards to the digital aspect, students provided interesting connections, for example, in terms of how the necessity of precision in typing commands within interactive fiction texts relates to how one needs to communicate with artificial intelligence (A.I.) applications such as Siri. Such an articulation of technological literacy reveals a reflexive stance in students with regards to the importance of exactitude, particularly in terms of how communication with A.I.s necessitates precision, which may be at odds with how students (and all humans, for that matter) communicate with each other via digital devices.

The ambivalent tendencies of human communication via digital devices are perhaps most prominently evidenced through young people's use of textese (the slang form of communicating via text messaging). Textese and the effect of text messaging on writing, reading, and overall literacy has been discussed by a number of scholars, most recently by Ouellette and Michaud (2016). These researchers, unlike the common discourse that textese and text message writing techniques hinder writing and literacy skills, demonstrate in their study that there was little

connection between text-messaging or use of textese and language- and literacy-related skills in young adults (p. 220). What is perhaps most fascinating about their study, is the fact that their data presents a divergence from recent studies that claim negative outcomes of textese use, whereas Ouellette and Michaud do not. They claim it may be the result of the increased changes in technology, such as the use of predictive messaging and QWERTY keyboards, which may explain the decrease of textese in recent years. All of this might seem counter-intuitive to many of our perceptions of students' and young people's writing indeed, assumptions about how they write when using digital technology. However, the implications for the classroom, particularly when using a genre of digital literature such as interactive fiction are rich, as this genre uses an interface that demands precision, and for this reason alone, may prove productive particularly for second language learners who would benefit from practice in basic verb-noun statements, given that this is interactive fiction's main interface. Furthermore, students can reflect upon their own practices with technology, either in regards to textese, or A.I.'s more non-human characteristics, for as one student claimed: "If you don't [write] it correctly it doesn't work, like the game is not gonna answer you so you have to find a good way of typing words...".

Other pertinent examples that related to their digital practices included the connections they made to hypertext fiction. The students' evocation of clicking on links that may lead to unreliable news sources was particularly poignant, given that this focus group took place shortly after the 2016 American presidential election where concerns about 'fake news' were frequently mentioned throughout news media. The term 'fake news' is defined by Allcott and Gentzkow (2017) as news articles that "intentionally and verifiably false, and could mislead readers" (p. 213) and are frequently spread through social media sites such as Facebook and Twitter. Though Allcott and Gentzkow (2017) do not claim that 'fake news' was a determining factor in the

presidential election, they do highlight the fact social media was a significant source of election news (p.223). Thus, as presented in the preceding chapter, students evoked the term ‘fake news’ and made interesting connections between the ways in which hypertext fiction, and the ways contemporary media function. This awareness is consistent with increased calls for digital literacy in formal education have become stronger (Butler, 2017) to countermeasure the flood of disreputable sources and sites, not to mention the importance of social media in young people’s lives. This digital literacy, which also contains information literacy, is a much-sought element in formal education, particularly as technology advances at an exponential rate and often - and unfortunately - formal education is at odds to keep up. Therefore, this demonstrates another example of the ways in which digital texts such as hypertext fiction can relate to students’ digital practices, and more importantly, their critical media literacy.

Like hypertext fiction, the hypermedia fiction of the study also related to students’ digital practices in effective ways. As demonstrated in chapter four, texts such as *The McDonalds Videogame* and *Freaky Flakes* allowed students to make connections to the discourses of exploitation and corporate maleficence. However, what were arguably the strongest formal elements to make these themes clear were the use of multimodality and procedural rhetoric. When students arrived at this point in the study, they had encountered texts such as interactive fiction and hypertext fiction that were less multimodal. *The McDonalds Videogame* and *Freaky Flakes* were games that featured much more visuals, audio, and the need for interaction, and thus were more similar to contemporary forms of digital games students may have been familiar with. Even if some did not regularly play digital games, many of the students were familiar with the basic multimodal and interactive elements of contemporary games. Thus, these texts connected to current practices in two ways: through the use of digital elements that students tend to be familiar

with (multimodality, interactivity) and through the dramatization of themes that are prevalent in different texts that they currently consume (exploitation, social justice, corporate maleficence, dishonest advertising techniques).

During the analysis of the students' reactions to the assigned hypermedia texts, what was perhaps most surprising was one student's discussion of *Loss of Grasp* and its explicit theme of control. The student's application of that theme to her use of social media sites such as Facebook, dramatized in the game when the text's A.I. retypes other words than what the reader/player is typing, demonstrates an intriguing element of technological, as well as digital literacy:

I think that the moment you wrote and that it retype[s] everything for you, I thought that was a very strong symbol [...] like those things on Facebook or social media, like, I really control what I'm saying and what people will think about what I am publishing and like, how I should write stuff and making no mistakes, 'cause it's very public, and it kind of reflects who I am.

Issues concerning control are prominent in relation to digital, and especially, social media. As Davin Heckman (2010) points out, *Loss of Grasp* dramatizes this in that its principle theme is about control, but particularly the loss of control many feel as users of various media in times of transition (para. 6). Clearly, Heckman is discussing the feelings of anxiety one feels when transitioning from one technology or medium to another. Yet, I believe his quote is pertinent in evoking the aspects of one's configuration of the 'self' in reality, and transitioning that concept of the 'self' to the virtual. Such an experience is articulated by the aforementioned student in how her

social media interaction can be conceived of as a digital performance, one that she is able to be self-reflexive about because of the text.

Ensslin (2014) has also effectively analysed the manner in which *Loss of Grasp* encourages self-reflexivity on the role of technology in contemporary life. In her analysis, Ensslin believes that the text makes the reader/player reflect on their interactions with the unique interface, allowing them to question their frequent submissive attitude towards how they use digital media (p. 85). Thus, as Ensslin alludes to, what is particularly effective about these texts is that these issues need not be discussed in class in the abstract, but can be experienced via praxis through these digital devices. For instance, the student such as the one cited above *experienced* this feeling and made meaningful connections to her use of technology and her attitude toward digital media. This speaks to how texts such as these afford a more involved understanding, beyond abstract theory or disembodied connections. It highlights an effective learning element, discussed by many theorists of education (Dewey, 1913; Kolb, 1975; Piaget, 1951) who have highlighted the importance of learning through doing, or as Squire (2008) has effectively claimed in relation to digital technology, a ‘knowing through doing’.

Finally, an interesting example of a literacy that emerged during the study that relates to students’ practices and how they differ in contemporary education practices was the particular formulations of both cultural and information literacy. As discussed in chapter four, I interpreted particular instances and actions that occurred frequently in the classroom as examples of cultural literacy, but ties to information literacy. These instances emerged when I had students research and find ways to beat their games, or find ways to get around difficult situations after making attempts on their own. Indeed, this is a rare form of literacy that goes against the “don’t look at

the back of the book for the answers” culture, often promulgated within formal education. Gee addresses this difference quite effectively when he discussed walkthroughs and cheats, and the validity of using them:

Of course, if children had walkthroughs in school when they studied things like science, we would call it ‘cheating’ (let alone if they had ‘cheat codes’). But, then, imagine what a science classroom would look like where learners wrote extensive walkthroughs according to strict norms and debated when and how to use them, debates that became part and parcel of the learners’ growing appreciative systems about what it means ‘to do science (well)’. (p.98)

Here Gee highlights a significant problem in formal education that is often at odds with what students do outside of their classrooms. Students frequently engage in these practices outside the classroom, but for a variety of reasons, they are denied the right to use these practices when inside the classroom. Indeed, Gee goes further and points toward how what occurs in formal education is also at odds with the activities many students will do in their respective fields in the future: “And, indeed, in a sense, real scientists do have walkthroughs. They know (through talk with others and through texts) the case histories of how relevant related discoveries in their field were made. They also have opinions about how closely one should consult or follow these histories” (p.98). All of this relates to an understanding of sociocultural literacy, as per what is accepted or unaccepted in a given community. Furthermore, this has implications for the NLG’s conception of situated practice when they emphasize the importance of outside of school communities and discourses, and the focus on their importance within the school learning experience (p. 85). The connection here to cultural literacy is that it is not considered appropriate

in school (thus, a part of school culture), yet is appropriate outside of school. Moreover, this has important ties to information literacy, which will be discussed below.

To demonstrate how the practice mentioned above also ties to information literacy, it is important to unpack the nebulous term of cheating in regards to digital gaming. As Consalvo (2007) notes, cheating is a significant, and complex, part of gaming. Rather than define the term through a simplistic and moral determining fashion, Consalvo states early in her text that she is more interested in how game players negotiate cheating and that she believes it is “important to keep our understandings of what cheating is or might be open to interpretation as well as debate” (p. 5). This is a strategic move, especially because defining cheating in digital gaming is complex. For instance, cheating in a massive multiplayer online game can be significantly different to cheating in a role-playing game in which one player cannot interact, and thus cheat, other human players. Moreover, the difference between cheating, as in surpassing a difficult situation in a game with the help of ‘outside’ information, and reading surrounding material around a game and being *informed* about certain in-game elements, is not a clear binary. It is here where Consalvo’s most interesting, and relatable moments to the world of literature, are discussed, particularly when she brings up game paratexts. Borrowing the term from Genette (1997), who defined a paratext as the surrounding textual material of a literary work - be they a table of contents, a title, a review of the work - and how these all shape the reader’s interpretation of the text in question, Consalvo discusses their importance in the process of cheating. For Consalvo the ‘partextual industries’, ranging from strategy guide publishers, sites, and enhancement devices, cater to game players and largely inform how players should play games (p. 84). However, whether one considers using these texts as cheating or not seems to be a subjective issue. For instance, Consalvo conducted a study on how game players define cheating and indeed,

based on the responses from the 24 subjects she interviewed, the response varies. Nonetheless, there are overarching themes that emerge, and a continuum of what could be considered cheating. Firstly, the idea that cheating creates an unfair advantage for the cheater is a prevailing theme that has emerged from her interviews. As far as a continuum of defining what is meant by cheating is concerned, on one side you have those who consider that completing the game with any outside, paratextual help (walkthroughs, hints, game guides) qualifies as cheating. In the middle of this continuum you have those who believe using paratextual help is okay, but using codes to alter the game mechanics (gaining extra lives, health, and ammunition) to be cheating. Finally, at the far end of the spectrum, you have those who believe that as long as you are not playing against a human competitor, you are not cheating. Clearly, no definitive understanding of what cheating is in relation to digital games is provided. However, the continuum created by Consalvo in response to her subjects' interviews provides some sense of the issues at play.

In relation to this study, it was the hope that students would occupy the place within the continuum where one takes advantage of paratextual guides and outside information but does not alter the code of the game. As mentioned in chapter four, some eventually did use paratextual help (e.g. walkthroughs), particularly for their chosen digital games. However, many did not, especially at the beginning of the study when the students were having difficulties with interactive fiction. Thus, this may be cautiously interpreted as an example of both sociocultural literacy and information literacy. This is an example of sociocultural literacy in the sense that some students may believe that it is inappropriate to search for answers online, given that this is not typical of what happens in a classroom. I use the word cautiously here, because it is not definite that this is the case. However, one of my student's response when asked what he did to

overcome a difficult part by shyly answering, “I cheated”, seemed poignant to me and was indicative of an aspect of sociocultural literacy.

Thus, it may also be the case that the situation of students not looking up information online falls more on the side of information literacy. This literacy is defined here as knowing how and where to seek information about the games they are playing, or having the knowledge to know that such information is available. Similar examples of a lack of information literacy emerged often in the study. For instance, when the infographic poster presentation was explained I asked students if they knew what an infographic poster was, and few seemed to know. I was surprised that they had not searched the term online using Google Images, for instance, to see what infographic posters may look like. Anecdotally, it has been my experience when teaching in computer labs that students will often ask questions to myself or ask among each other about rather simple notions or terms rather than search for it on the computer directly facing them. Perhaps for many students, they look upon the teacher as the source of knowledge and information while in the classroom, and are unaccustomed to, in that social context³⁴, relying on online information. Indeed, students have often asked me questions how to do relatively simple tasks with software like Microsoft Word, e-mail services, or other common applications, rarely do they search for the answers or specific information online. This recalls McGrew, Ortega, Breakstone, and Wineburg’s (2017) claim in regards to the paradoxical yet critical, information literacy young people seem to lack: “Our ‘digital natives’ may be able to flit between Facebook and Twitter while simultaneously uploading a selfie to Instagram and texting a friend. But when it comes to evaluation information that flows through social media channels, they’re easily

³⁴ Despite the omnipresence of technology, the importance of the face-to-face social is still present for many ‘digital natives’.

duped” (p.5). The paradox here is that young people seem to be immensely adept at using some technology and social media applications. However, their ability to analyse and interpret what information they find online, or the mere ability of knowing where and how to seek information, seems to be lacking.

Regardless as to whether one is talking about information or sociocultural literacy, ‘cheating’ in gaming is, at least in some ways, devoid of the negative connotation it contains in formal education. This presents a challenge for a pedagogue who is working within the walls of formal education, yet at the same time appropriating and assigning digital texts, and thus their attendant ways of ‘doing’, which may be at odds within formal learning environments. These challenges were particularly evident via the implementation of my study’s design in that students (and I as a teacher) were often operating in-between said cultures. On one hand, we were occupying space and performing the conventions of traditional school culture within an institution clearly identified with such a culture, yet, on the other hand, the students (and I) needed to break out of these traditional roles and ways of being and doing, allowing for more exploratory and contra-normative teaching, learning, and methodologies. Thus, for instance, the extent to which students were explicitly given all of the details of their texts, are left alone to figure them out on their own, and the appropriate amount of scaffolding they were given, was a frequent issue and will be discussed further in the overt instruction phase.

The final point that emerged in relation to situated practice was the issue of identity. The term identity here is used for the ways students articulated elements that demonstrated their reluctance to identify with, or as, gamers. This emerged most noticeably during a focus group when one student claimed: “usually people like do the all gaming thing, it’s like, you know, the

nerd type”. The student’s articulation may speak to the hesitancy and negative perception some students have about games and game players. The absence in relating to a particular identity is crucial, as mentioned above by Gee (2007) and Neville (2010), in developing critical learning. Moreover, it proves how problematic it can be in assuming that all students are interested in playing digital games or that it relates to their digital practices. Indeed, some students’ perceptions of game players, and digital games themselves, in that they can be violent, misogynistic, etc. is an issue teachers and researchers need to be aware of before implementing digital games into their pedagogy.

2.2. Conclusion to Situated Practice

Throughout the study, there were many instances during the situated practice that related to students’ digital practices. However, these were not necessarily anticipated beforehand. In other words, many of the moments and articulations that relate to students’ digital practices did not specifically occur during a ‘situated practice’ phase in which I made specific and clear connections to the texts or in-class activities, and students’ digital practices. Thus, what emerged, specifically in relation to the first specific objective (document what, and how, multiliterate articulations and affordances are engendered through such a framework) is that various points of convergence between theory, content of the digital games, and students’ practices were made evident at various parts throughout the pedagogical framework. This allows for a consideration of how to highlight these points better at the moment of situated practice in future iterations, and thus relates to the second specific objective (how the framework can be modified to better engender multiliterate teaching and learning using digital games and digital literature). For instance, focusing on students’ previous and current experiences, particularly from outside of school communities and discourses such as Facebook etiquette and projections of the digital self,

may allow students to better appreciate and understand a text like *Loss of Grasp*. In addition, discussions around getting lost down the metaphorical rabbit hole of clicking on various links and along dispersed, non-linear modes of communication, explicitly relates to hypertext fiction gameplay and creation. Finally, and perhaps more importantly, assuming that these types of texts will relate more to what all students engage with day to day, or that they will identify with digital games and being a digital game player, is highly problematic. Thus, in future iterations, this should be taken into consideration for this step and would strengthen a framework that uses these types of texts. Finally, all of the above deliberations are summarized in the below figure (figure 11).

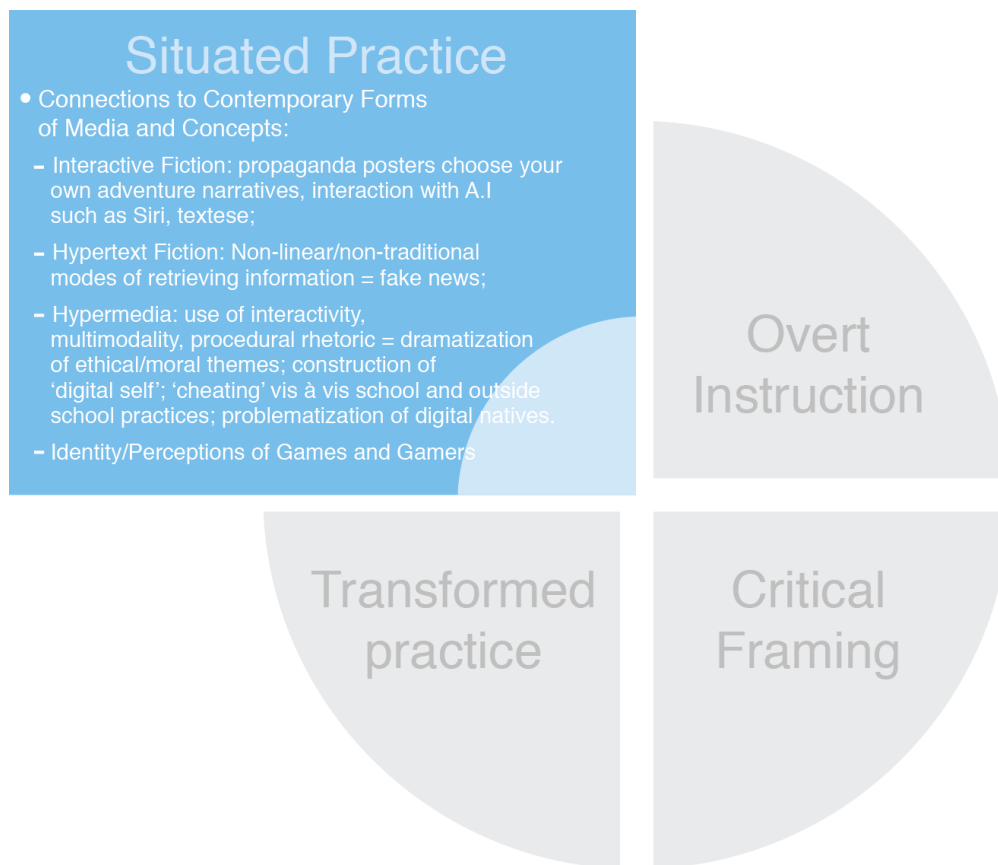


Figure 11. Summary of Situated Practice

3.1. Overt Instruction

Scaffolding the digital games and works of digital literature was a prominent issue throughout the study, none more so in relation to the overt instruction step. The initial plan for this study was that these texts were presented with some context, along with appropriate terminology. Thus it was clear from the onset that much of the introduction, scaffolding, and contextualization of the different genres for each week (interactive fiction, hypertext fiction, hypermedia and digital games) would take place during the implementation of the overt instruction phase. As mentioned previously in chapter two, the emphasis for this phase is that the teacher functions as a ‘mediator’ for their learning, appropriately scaffolding their learning and building on what the students already know (New London Group, p.86). Therefore it is no surprise that during this step, the main concern was the implementation of effective scaffolding that relates to a number of elements. First, the students had to understand how, exactly, to interact with (i.e. how to play) these texts. This first element was extremely important during a study where a third (7 out of 21, as per the pre-study survey) of the students claimed they did not play digital games, and thus did not have an understanding of how digital games are played. Furthermore, this reveals a literacy not considered for this project, that of digital game literacy. This is not the same digital game literacy discussed by others such as Klimmt (2009) who identifies three major dimensions in regards to digital game literacy. Klimmt’s dimensions relate mainly to psychological effects of digital game playing such as stereotypes and aggressive thinking, coping with the social affordances of multiplayer games, and negotiating playing motivation including the perceived risk of losing investments of time when not playing (p. 24-27).

Rather, the digital game literacy that is being referred to here, is one that entails only the basic elements of meaning making via digital games: how, when, and what to do within a digital game at any particular moment. In other words, how does one interact with non-player characters in a game? How does one pick up objects? Or more complex questions such as: how to solve puzzles or how to know when one is completing a task or going in the right direction? Evidenced by the post-study survey, three students mentioned that they had difficulty figuring out where to go and how to advance in their game, with two of these students claiming that they had to look on the internet to find out what to do, including one mentioning that the interactivity of the game was challenging. Thus, the lack of basic game literacy was indeed an issue, though it is difficult to say for how many, given the small number of the survey's respondents. However, it was evident that this basic understanding was crucial for students and could be the source of some anxiety or reluctance to play these games.

With the scaffolding around how to play the works of digital games and digital literature being taken into account, the next scaffolding element that was apparent in the data analysis was how to scaffold the content. Indeed, frequent concerns were mentioned in the observation notes of how to balance giving enough, but not too much, information about the texts. Also, two students responded that the texts were confusing when answering the survey question "The most difficult aspect about the digital literature we played was...". Given that these texts rely on the students' ability to interact, and then interpret, the texts, this was often an issue. This was particularly apparent in *Beneath Flores*, where, as mentioned in chapter four, a possible interpretation of the texts' intention is to make the reader/player feel 'othered' by the Inuit allusions within the game, which may be interpreted as reflecting the 'othering' felt by Indigenous groups. Moreover, this can also relate to the contemporary use of technology and

how one may feel 'othered' and alienated when first playing digital games. This is similar to Heckman's interpretation of *Loss of Grasp* mentioned above, where one can feel a loss of control when transitioning from old forms to new forms of media. Thus, proper scaffolding and teacher-student collaboration in the implementation of this step must be considered for further studies and teaching.

Paradoxically, an important part of this study was allowing the students to immerse themselves in the texts so that they could engender self-reflexivity about technology and how it was used and dramatized by some of these texts. Therefore, giving away all the information could be detrimental to aspects of the study, such as how students used technology and the Internet to assist their digital game playing. These concerns underline the issue that part of the teaching of texts, unlike traditional print literature, is figuring out how to play them, via forums, walkthroughs, and fellow students' experience. This aspect has been discussed by scholars, such as Gee (2007), who believe that contemporary digital games have learning theories embedded in them. However, it does not mean, as Gee argues, that game developers and game designers have been reading academic texts on cognitive science. Rather, game creators implicitly understand the necessity for strategic thinking, problem solving, and the value of collaborative work in their games without having to explicitly demonstrate this. Because of the implicit learning theories embedded in games, very few people who play digital games read through the instructor's manual before playing. Therefore, the implicit nature of learning how a game works or functions affected my implementation and teaching of these games for better and for worse.

Another key element of overt instruction discussed in the conceptual framework was the importance of metalanguages. These, as the New London Group explain, should include both the

‘what’ of literacy pedagogy (for instance the language used as design elements) and the ‘how’ of learning (this can relate to each steps, or put broadly, can be interpreted as how the language/design elements mediate learning). As discussed in chapter four, an effective example of this was the instruction of procedural rhetoric. Procedural rhetoric contains elements that relate to both the what (explicit mention of the design grammar and elements of an interactive, digital text), and the how (the ways in which those texts persuade or produce a subjective understanding of a concept or topic). As discussed in chapter four, this was an important concept for their understanding of the persuasive elements of digital games, and also served as a bridge for teaching literature. For instance, students were taught elements of rhetoric and the use of persuasion in different texts in their previous English courses at the college. Bogost’s (2007) concept of procedural rhetoric thus allowed them to take their aforementioned understanding of certain elements produced in traditional texts and situate it in the context of digital, interactive texts.

An implementation of this point was evident during my introduction of the concept vis-à-vis the social media site *Facebook*, as an example. Given the complexity of understanding a concept such as procedural rhetoric – both explaining it and couching that explanation in their prior knowledge of rhetoric – activated their prior knowledge into the digital realm and made its understanding attainable, but not immediately evident to some. Those students who still had difficulty understanding the concept understood it better when we looked at the anti-advertising games *Freaky Flakes* and *The McDonald’s Videogame*. This highlights the importance of grounding the theory around digital games and other digital texts connected to their own experience, or as the NLG discuss: “where they come to conscious awareness of the teacher’s

representation and interpretation of that task and its relations to other aspects of what is being learned” (p. 87).

Within such an approach, the teacher becomes a mediator for the students’ learning process, assisting learners in constructing and co-constructing knowledge amongst, and by, themselves. Indeed, there were moments where this occurred during my study, such as when students were working on their hypertext fiction narratives. However, overall, there should have been more opportunities for this to take place, and this aspect should have been more present throughout the study. Perhaps before each phase were to take place, I should have been more conscious of this and made an explicit effort to allow the students to work with each other and by themselves. That being said, I did not prevent this, rather stepped back and allowed it to happen (or hoped that it would).

Another element that emerged which may have significant implications for overt instruction were the instances of goal-directed behaviour. As detailed in chapter four, students communicated the importance of goals within their games throughout the study, and in certain situations, the lack of them made the game or work of digital literature less interesting. This occurred most clearly for the interactive fiction texts where the lack of set goals or objectives in *Galatea*, for instance, made the text more ambiguous and puzzling than the other interactive fiction text the students played, *Lost Pig*, which has a clear goal and achievement points. Indeed, goals and objectives are frequently used in education, particularly in colleges in Quebec where

competency-based instruction is the current model³⁵. However, pushing back on the competency-based model and allowing students to experience and attempt something that does not fit in the conventional model of goal-directed behaviour, such as a text like *Galatea*, may also have benefits. Authors such as Biesta (2014) have warned against how highly structured, outcome-based education nullifies risk, which is essential for effective and creative learning. Thus, perhaps games such as *Galatea* and *Beneath Floes* can provide a virtual experience of less constrictive goal-directed thinking, and instead favour situated experience and creativity over simply completing objectives.

The issue of the lack of goals also related to the hypertext fiction texts with surprising results. During the focus group discussion, one student mentioned how the actual meaning of the story was irrelevant and that they were more interested in completing the goal and acquiring achievements:

I don't know, I just want like...go further in the story, well...without I don't really mind not knowing what it means, I just want to go further and like, discover different endings and we had like achievements we do, that we can reach, and I just want to have like, new achievements and if I didn't know one of the two choices I have to take, I took the other one.

The student's statement relates to Lock and Latham's (2002) definition of a performance goal versus a learning goal. The former is defined as the score or result one attains on a specific task.

³⁵ Starting in 2000, all levels of education in Quebec went through a reform that replaced objective-based teaching with competency-based teaching (MELS, 2005). The shift was intended to diminish rote learning and focus rather on teaching skills and competencies (Elharrar, 2006).

Thus, the importance is not so much the completion or the efficacy of completing the task itself, rather it is a score attributed to the task. A learning goal, on the other hand, “refers to the number of ideas or strategies one acquires or develops to accomplish the task effectively” (p. 706). Thus, a learning goal is more in line with educational goals and objectives, in that it implies students should acquire a more comprehensive understanding of how to complete a task. Given that this emerged in regards to interactive narratives carries particular importance for how these texts are taught in class. What is particular about works of digital games and digital literature is that most texts attempt to balance both goals and a presumed understanding of the narrative. In other words, narrative-based digital games and digital literature have a story to tell. But this story is often fused with game-like goals and objectives. In some ways, this is what makes these particular texts unique. However, this also has pedagogical implications in that students may focus on one, as opposed to the other. This may be a problem, particularly in a literature course where the focus is on narrative, and students may get distracted by the goals or completions, versus focusing on the narrative elements and therefore their ability to develop and sustain critical literacy about the narrative, such as its themes, implied values, or different ways of understanding significant moments or its overall meaning (as will be discussed in greater detail in sub-section 4.1 below).

Goals and objectives, specifically in how they relate to lose-states, also surfaced in regards to goal-directed behaviour. Lose-states, as opposed to win-states, can be defined by the condition or state in a game that is a result of an unsuccessful completion of a predetermined task or goal. One student highlighted the lack of lose-states in *Freaky Flakes* while providing a mild critique of the hypermedia game, claiming that “[I]t’s pretty straight forward: There are a few easy questions that you have to answer in order to make the box of cereal good. You can’t lose in

this game”. The student thus highlights the importance of challenging goals and objectives in these games, which also has ties to education. In this perspective, digital games share a common element with basic perspectives in pedagogy, particularly keeping students on task, similar to elements of project-based learning. Project-based learning has students focus on goals and problems that are meaningful for them, allowing them to learn by doing, a form of situated learning that applies a constructivist approach (Krajcik & Blumenfeld, 2006). Though it can be argued the goals and objectives in these digital games are not necessarily ones that the students choose or decide upon, it does open up links to education that could be further explored in the classroom.

Finally, one last element of digital games that relates to goal-directed behaviour is the behaviourist approach to learning. A behaviourist perspective in education implies learning is most effective when learners associate positive or negative reinforcements for their efforts (Skinner, 1978). Positive and negative reinforcements dramatized by the success in achieving, or failure to achieve, goals in digital games is a close corollary to a behaviourist approach. However, in one student essay, a different perspective in relation to the goals in a digital game was discussed, highlighting both a behaviourist approach, and an interesting interpretation of rewards to motivate ethical behaviour:

Either by reaching another level or by getting the little mention of success in the bottom right of the screen, the player is emotionally compensated for his good play. The notion of achievement is important in a game of that kind since it helps the progression of the plot, and encourages the gamer to keep going. This idea of reward,

as in real life situation, pushes an individual to act for the best of himself and his peers, and take decisions in order to accord the most benefits for the most people.

Here the student articulates an interesting example of behaviourism but applies it to the digital game realm and in doing so, highlights the ethical imperative in her game. The student's analysis demonstrates how students may negotiate rewards and goals that have ethical consequences, but may also develop critical reflections about how such elements are integrated in digital games.

3.2. Conclusion to Overt Instruction

Thus, what emerged, specifically in relation to the first specific objective (document what, and how, multiliterate articulations and affordances are engendered through such a framework), is that various points of convergence between theory, content of the digital games, and students' practices were made evident at various parts throughout the pedagogical framework. However, as was mentioned above, it would be important to highlight these points better at the moment of overt instruction in future iterations, which thus relates to the second specific objective: how the framework can be modified to better engender multiliterate teaching and learning using digital games and digital literature. Allowing for students to complete their understanding alone and with peers was something I felt needed to be improved upon. Also, the tension within scaffolding, both on the level of form (how to interact/play these text) and content (activating their background knowledge) was a challenge and needs to be considered further in any future iteration I would institute. Finally, all of the above deliberations are summarized in the figure below (figure 12).

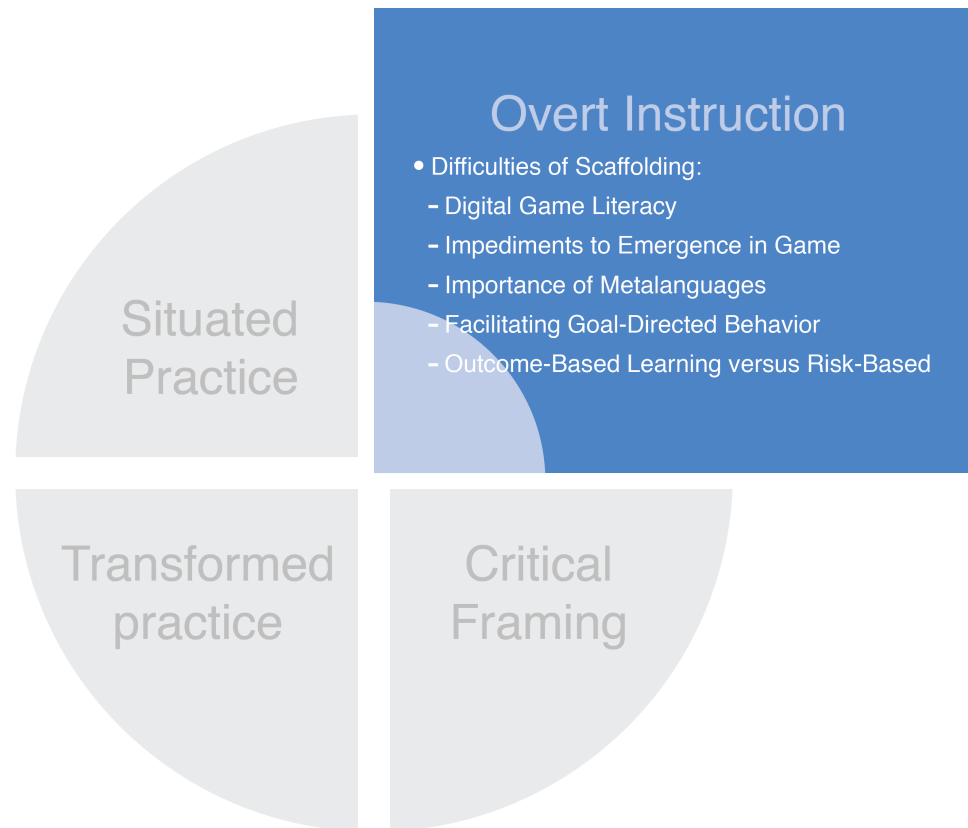


Figure 12. Summary of Overt Instruction

4.1. *Critical Framing*

This step arguably revealed the richest multiliterate articulations throughout the project. Given that this is where students apply theory, demonstrate their understanding of it, and account for its cultural location (NLG, 1996, p. 87), this step inherently provided self-reflexive practices, which are intended to be invoked in English literature courses provided at the college level. Indeed, given that two of the course competencies (see Appendix C) demand that students must “situate a literary text within its cultural context” and “detect the value system inherent in a literary text” (MELS, 2009, p. 11), such critical framing was central to the course and my study’s objectives.

Part of the importance of this step is when elements from overt instruction are put into action and are thus made evident by the students' ability to apply theory and concepts on their own. As demonstrated in chapter four, a significant theme that emerged from the data was the ways in which the students were aware of how the digital texts examined during the course allowed them to interact with the discourses presented in the texts. As mentioned in the previous chapter, one specific example emerged when one student discussed how in the game *Her Story*:

The fact the game mainly happens through an old search engine is what allow[s] the plot structure to be so complex. Furthermore, the old and inefficient search engine could represent that the fears and judgments about mental illness should be now part of the past.

This student, without any prior discussion in class of the values, ideologies, or discourses around mental illness, was able to effectively apply a critical regard towards these issues as well as their sociocultural antecedents, while couching this perspective around the digital processes of the game via multimodality and procedural rhetoric. As argued by scholars such as Flanagan and Nissenbaum (2014) as well as Sicart (2014), the student explicitly presents an excellent example of how digital games can allow players to interact, and experience, value-laden discourses which they would not normally experience in other forms of media.

Similarly, another student was able to touch on issues surrounding ethics and morality in his game, *The Walking Dead*. In his essay, the student explains how the game “undeniably conveys that morals and ethics are truly tested when put in extreme circumstances that force

difficult decisions to be made based on what is right and wrong”. Indeed, *The Walking Dead* is a game about making difficult moral decisions in stressful situations. However, as Staaby (2015) argues, *The Walking Dead* also “presents the students with dilemmas they most likely have not thought of before, and this creates room for the innovation that is so crucial for critical learning” (p.82-83). What is most important to enact this critical learning, for Staaby, is that digital games present students with authentic situations that they can experience literally through ‘another’s’ eyes, which also creates an “element of agency that other media cannot provide” (p. 80). Furthermore, when properly guided, students can articulate self-reflexivity of how the game enacts this agency. For instance, explanations about multimodality in the classroom allowed the same student to connect the importance of multimodality in providing a sense of identification with the characters’ emotional stakes within the game:

[T]he use of multimodality helps provide an intriguing factor to the game [...] The actions of characters can be very graphic, therefore adding intensity to the game, enabling users to feel more involved and connected to what goes on throughout the process of the video game.

As is evident in the above citation, the student’s critical literacy and critical framing were enacted by the game. Yet, what is of particular importance is the ways he describes how multimodality enhances the feeling of embodiment within this given text.

Embodiment was crucial to the critical framing phase, particularly as an element that enhanced students’ ability to articulate literacies. This was evident for the student discussing *Her Story* above, along with the comments presented in relation to more politically overt texts like

The McDonald's Videogame, revealed the potential to tie these texts to a variety of literacies. *The McDonald's Videogame*, as demonstrated in chapter four, allowed students to articulate elements of media and critical literacy, via their texts, which were elaborated during their discussion productions. Media literacy became more of an active, and one could say, embodied element within these games, as opposed to traditional forms of media where the consumers are more passive. This sense of embodiment via digital games is argued by Chee (2007) to be a necessary element in game-based learning given that the embodied perspective is “more consonant with participatory and collaborative modes of learning where knowledge is viewed in terms of the capacity for intelligent behaviour rather than the possession of any mental thing” (p. 14). Such knowledge is dependent on its material conditions and can be experienced, created, diffused, and experienced through those conditions. Thus, the nature of those conditions, depending on if they are delivered through active or passive media, allow for a more, or less, embodied experience. For instance, when comparing *The McDonald's Videogame* to more traditional, and in some ways passive forms of media, such as documentaries, one student claimed: “I think that when the difference between the documentary and the games is in the documentary, they are bringing facts and in the game, you discover the facts on your own.” This also mirrors Sicart’s (2014) claims where he argues that digital texts are effective in that “the true political effect of these objects takes place when we occupy them” (Sicart, 2014, p.73). In other words, this type of digital functionality allows students to occupy, embody, and interact critically with the values, cultures, and discourses presented within these texts, that was crucial to the course’s objectives.

Such an embodiment also points to the importance of play. An embodiment afforded in interactive, digital texts allows the readers to inhabit, personify, and essentially participate, as active readers/players, in the concepts and theories presented to them in class. This was alluded

to above with Squire's (2008) comment of "knowing through doing" and has a long tradition in education, going as far back as Dewey (1913) and Piaget (1926) with their respective formulations of constructivism and later, with Vygotsky's (1978) addition of socio-constructivism. Moreover, it is the constructivist method, combined with play that is crucial for an understanding of the importance of these elements in digital games. The importance of play along with all its philosophical implications has gained prominence in digital games studies (Maýra, 2015; Sicart, 2014; Stenros, 2015; Strauerbig, 2016) and perhaps unsurprisingly, conceptualizations of play in digital games have created grounds for debates within the field of games studies. These debates are often split between the ludologists (Aarseth, 1997, 2006; Eskelinen, 2001; Juul, 2005) on one side arguing for the importance of play, and narrativists (Pearce, 2004; Ryan, 2006) on the other arguing for the importance of narrative and story. Though these debates have decreased over recent years, they demonstrate the vital implications game studies has in academic discourse, and more importantly for this study and in the classroom. For instance, such a debate may provide fertile ground for discussion in the classroom as to whether digital games are more game than story. This could be particularly pertinent in a literature classroom such as the one where the study took place in that students may reflect about what makes a story as story, or alternatively, a game, a game. Moreover, connections could be made to real life, when concepts such as chance, choice, and destiny (or determinism) are dramatized through digital texts. Indeed, the students in the present study were already able to begin interrogating such issues, evident by one student's analysis: "even if you make the choice, you still go to the same place or this person would die anyway, just...I think I can relate this to our lives". Thus, digital games can foster an experiential aspect of more abstract notions around play, games, and chance theory. However, despite the student's pertinent comment, this element

was rarely discussed in class because it had not been considered before the creation of this course/study.

4.2. Conclusion of Critical Framing

Indeed, the absence of discussion around the above points connects to an important issue in relation to implementation. Upon reflection, it was evident that there were a number of aspects that could have been discussed in the classroom to further activate students' critical reflexivity, yet were not. In other words, more could have been done in relation to experience and embodiment through digital games and digital literature. This is not to say this was ignored; of course, elements such as procedural rhetoric and the ways discourses are interacted with in contemporary social media were discussed. However, more could have been focused on during the implementation of critical framing. For instance, students could have been guided to bring the concept of embodiment further, interrogating the ways in which such digital media uniquely afford functionalities others do not, thus a compare and contrast various types of media and what this entails in a given interpretation. This could also tied to larger, more value-laden discourses seen in such a course, and possibly tied into the students' digital practices.

At the very least, the above section explicitly demonstrates the rich multiliterate possibilities of using digital games and digital literature in an English (or any other language) classroom. Give that the objective of teaching literary analysis is, arguably, more important than almost any other objective in such courses, to teach critical thinking and bolster in students the ability to frame an analysis of a cultural text, the possibilities detailed above in regards to critical framing are impressive. That digital, interactive texts may afford a critical perspective on a variety of thematic issues on the level of content, and a critical perspective on the level of its

technological form, uniquely situates these types of texts as exemplars for critical regard in a language and literature classroom. Finally, all of the above deliberations are summarized in the figure below (figure 13).

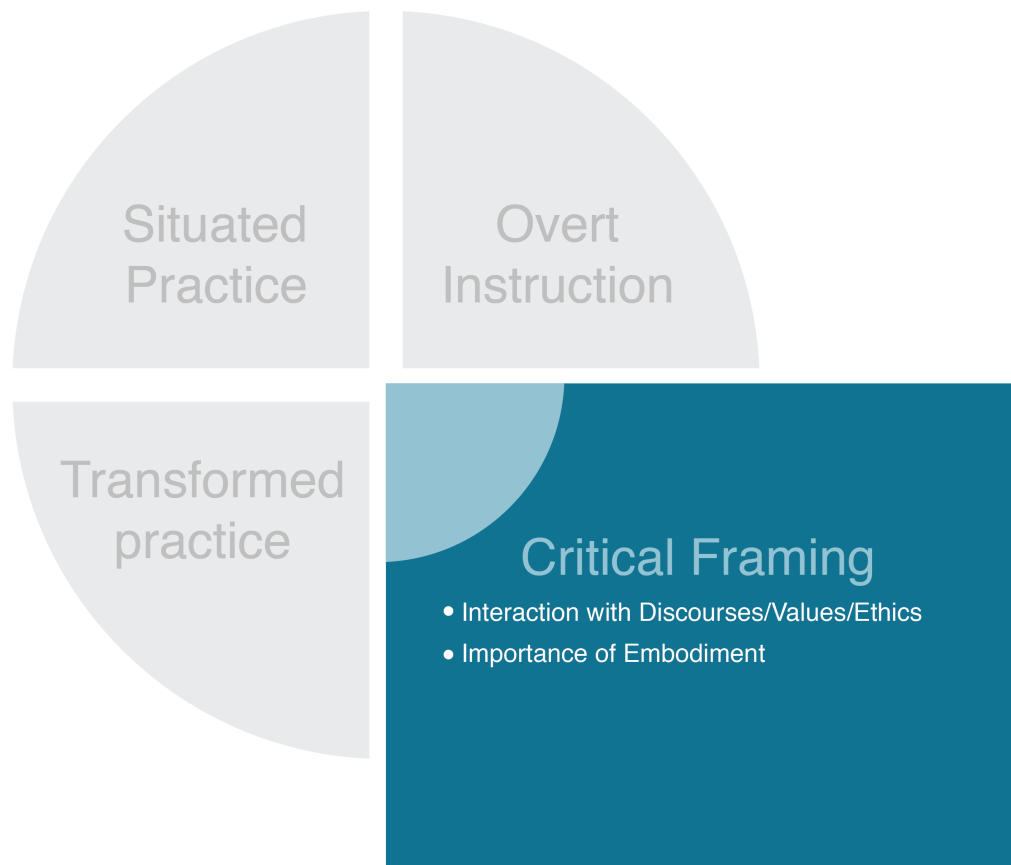


Figure 13. Summary of Critical Framing

5.1. *Transformed Practice*

During transformed practice, a number of interesting themes and issues emerged which have a variety of consequences for future studies similar to this one. First, it was interesting to see the extent to which students' preference for multimodality emerged. This came up throughout

a number of observations, but perhaps most notably during the interactive fiction phase. As detailed in chapter four, students' comments and group discussions underlined multimodality as a crucial absence in *Lost Pig*. The importance of multimodality was more present when students were asked what they would add to their own creation of interactive fiction.

Despite the fact that these texts were interactive, and the belief that students would thus enjoy these texts because of their interactivity, the fact that they were only text-based (in the lexical sense) was a cause of frustration for many. This situation highlights how multimodality, was arguably a more important element than interactivity for my students. The affordances and learning preferences of multimodality in technologically mediated environments has been studied (Birch & Sankey, 2008; Moreno & Mayer, 2007). However, no work to date has been done to demonstrate students' preference for multimodality over interactivity.

Perhaps the most pertinent example of transformed practice, as per the New London Group's conception, was the students' digital hypertext creations. In their article, the New London Group emphasizes transformed practice as the opportunity for students to re-create a discourse for their own purposes and in doing so transfer previously developed meaning-making practices in other sociocultural contexts or sties (p. 87-88). This was evident when students applied the concepts of hypertext fiction (e.g. player choice; elements of non-linear narrative; second person perspective) into a discourse related to their own sociocultural context and realities. A particular example of this was when a student dramatized a night out partying, detailing the consequences of the player's actions. This also demonstrated the ways in which the affordances of such texts allow for a self-reflexive, critical regard. For instance, were the students to develop a linear storyline, there could only be one direction the narrative would lead, along

with one outcome. Having a multi-linear, multiple-outcome story allowed the students to reflect upon a variety of decisions and the multitude of consequences in regards to those decisions.

Finally, the student essays and digital game walkthroughs provided students with opportunities to recreate and rearticulate some of the discourses mentioned above. Though the student essays were mentioned above in critical framing in regards to developing a critical regard to certain discourses and value systems, it is also important to highlight the students' ability to recreate a discourse via the argumentative essay by analyzing, and deploying, game studies terms and literary concepts. Moreover, the students' walkthroughs allowed them to transform a traditional type of practice, oral presentations, into a different practice complete with its different modes and ways of presenting that discourse. However, one significant lack was that there was very little data collected on the ways students developed and created their walkthroughs. Despite the fact that students provided interesting citations during the last focus group, such as how some would have preferred to have viewed other students' walkthroughs, it would have been worthwhile to have more information about their experience, particularly the ways they may have enacted multiliteracies when performing this activity.

5.2. Conclusion to Transformed Practice

Like critical framing, transformed practice allowed students to explicitly articulate a variety of literacies and dramatize elements seen in class. As for the implementation of this phase, there were a number of issues that arose as so far as its connection to one evaluation in this course. First, having their hypertext narrative count for only 15% of their mark was a mistake, considering many of the students spent more time on this evaluation than they would typically spend for a 15% evaluation. Anecdotally, a few students told me that they greatly enjoyed this

project and would have liked more time to work on it and go further, adding other modes such as images and sounds to their narrative. Also, it was unfortunate that students were not given time to brainstorm a digital game idea during the final week of the course, because of the one class being cancelled. This would have allowed them to apply the game theory, concepts, and literary devices they had learned up to that point in the module. Finally, all of the above deliberations are summarized in the figure below (figure 14).



Figure 14. Summary of Overt Instruction

2. GENERAL OBJECTIVE TWO

The second general objective was to observe and document potential theoretical points of convergence that may occur between multiliteracy pedagogy and second language acquisition theory during the implementation of the study's pedagogical framework using digital games and digital literature. More specifically, the objective was to examine and document the ways in which these points of convergence can be expanded upon and improved. Thus, a discussion of those points of convergence, particularly as they were mentioned in chapter four under the heading 'L2 Literacy' will be discussed here, along with considerations of how they can be improved and expanded upon in future teaching and/or studies. However, before this, a brief mention of the sociocultural context of the study will be discussed, given that the unique sociocultural linguistic reality of the college and its students played an important role in this study.

2.1. Sociocultural context of English language learning

For an Anglophone college, where a majority of students identify themselves as Francophones, developing an effective teaching design that takes into consideration L2 teaching and learning is crucial. Indeed, the reality of an Anglophone college such as Champlain College – Lennoxville Campus, similar to many other Anglophone colleges in Quebec, is that many Francophones enrol with the hopes of improving their English, especially since this is the first opportunity that many Francophones are allowed to because of Bill 101. In 2015, 5.6% percent of the student body in Anglophone colleges within Quebec identified themselves as French, first language speakers (Méloche-Holubowski, 2016). However, there are exceptions. For instance, Mariannapolis College claimed that 40% of their students attended a Francophone secondary

school, with at least 15% of the student body claiming French as their first language (Méloche-Holubowski, 2016, para. 2). This reality is somewhat similar to Champlain College, Lennoxville campus where the study took place. Though no data has been collected to prove this, I can say that anecdotally, over the four years I have taught there roughly 40-60% of students in my class appear to have been French first language speakers. About half of these appear fully bilingual (efficient in both languages in the four skills of reading, writing, listening, and speaking), but some (roughly about 10-20%) have difficulty with one or more of those skills. Thus, for these students, attending Champlain College is an immersion experience requiring a great deal of work and improvement of their English in order to pass their courses. This is more so than other colleges, as well as the other Champlain campuses (St-Lambert near Montreal and St-Lawrence near Quebec City), because what is unique about the Lennoxville campus is that there is no minimal entrance requirement, and no limit to the number of students that are accepted unlike the other two campuses. In other words, despite the fact that students may have struggled in their previous secondary English courses, the college does not refuse entry for students whose English grades are below a certain threshold. And despite the fact that the college is not intended to be - nor do they advertise it as - an immersive English second language learning institution, the reality is that many students attend for exactly that reason.

Given the fact that many students are English Second Language (ESL) learners, the second general objective was to explore and document the ways in which digital literature and digital games can afford opportunities for students to implicitly learn language in an English first language classroom. More importantly, demonstrating the points of convergence between digital game theory and second language learning theory was deemed crucial to justify instances where meaningful learning can take place with future pedagogy of these types of texts. Throughout the

study, a number of instances that point to the convergence of game theory and second language acquisition were evident. For instance, the motivation of using digital, interactive texts to learn language was evident with one student who claimed:

Well, because of the interaction that is being made with real life or something like...our perception of the story, it gives us more motivation, I guess, learning and reading our English, because just reading a text, sometimes, like, yes it's fun, you can know something, understand something, but you don't have a...like...being a part of it, makes you more interested in it and like, if I would read a story just on paper, like I read it just to read it. Like, I would kind of try to understand but not more than that.

Motivation is a well-documented aspect of second language acquisition (Dörnyei & Ushioda, 2009; Gardner, 1985). Specifically, in relation to digital game based learning, some have highlighted the effects digital game based language learning can have on student motivation (Rienhardt & Sykes, 2013). As demonstrated in chapter two, research has shown that digital games can indeed appeal to L2 motivation (Guerrero, 2011; Sundqvist, 2015) and that students carry positive attitudes towards digital games as L2 learning materials (Chen, Chen, Chen & Yang, 2013; Yang & Chen, 2013). The results of this study, evidenced by the students' citation above, points towards the potential for similar results.

What is also interesting about this student's citation is the connection between interactivity (i.e. learning via doing or playing) as discussed above in relation to digital game theory, and motivation. This came up again when another student claimed: "Well, 'cause you're

not reading a story with all a bunch of words [...] you also interact, so you're using your English...to practice it". Indeed, the convergence of SLA motivational theory and interactivity may provide students, and teachers, with opportunities to leverage motivation in meaningful language learning situations. These situations afford experiences that allows students to interact and feel that they are embodying players and roles, allowing them to interact more with and use language.

Interactivity, including its ability to increase students' involvement through multimodality, also emerged as a significant affordance. In some ways, multimodality has an inherent ability to afford language-learning possibilities in ESL environments, given that the combination of modes can assist in text comprehension via, for instance, sight word recognition (Beechler & Williams, 2012). This was evident as per how one student alluded to the ways she consumes various texts:

Yeah I think I learn a lot by association, so I would watch [a] show in English with like, French subtitles and say: 'OK, they are talking about that, that's the [word] burden'. I think I saw that in a game, like, they made terms and also as he says, the fact that you are playing, that you are involved makes you reflect, you are more focus than maybe if you were just reading. Like, sometimes I just...like I see words but I'm not really reading, I'm not...So if you are playing, you kind of have to be involved.

Again, this student integrates the importance of interactivity, combining it with multimodality. Similarly, another student mentioned the ways in which sight word recognition helped them to understand: "Like, if you don't understand a word, at least you can see like a little bit the imagery

and kind of interpret it as we thought it would be so it helps a lot.” Another agreed, offering her experience: “And I think that the use of images helps us too... If we don’t know a word, we can associate to an image and it’s easier ‘cause when I read English words or adjectives and things like that, that I’m not use to, I can just refer to the image and I can associate to it”. Multimodality is indeed a factor here in the students’ comprehension of words and possibly, the texts’ overall meaning. However, it should be noted that this is a superficial understanding of multimodality, and is not necessarily related to the ways in which contemporary messages contain a variety of modes that can convey complex messages, as discussed in chapter two. That being said, multimodality, as per the student’s implication of the term in these specific, L2 contexts, is also combined with interactivity in that the student is allowed to “reflect” and consider the various modes to arrive at making meaning before taking action, thus forced into action, much like happens when conversing orally.

The above student’s claim of using subtitles to help understand the audio was a second learning technique used by other students. It was evident by viewing the student-created walkthroughs that some students used subtitles on their actual games. The use of subtitles in digital media such as films has been advocated by some (King, 2002; Whatley, 2012), with empirical studies demonstrating the improvement of student listening skills when subtitles are used (Rokni & Ataee, 2014). However, it is also important to note that two students were using French subtitles with English audio, while one student was using English subtitles and English audio. As demonstrated in their study, Markham, Peter, & McCarthy (2001) note that the use of first language subtitles results in a better overall comprehension than target language subtitles or not using subtitles at all. All of this demonstrates that digital games and digital literature, unlike traditional print literature, can afford a greater level of learning through these options.

Finally, one point of convergence between aspects of the digital games and digital literature used, as well as second language acquisition theory, was the concept of writing accuracy. Accurate speaking and writing is an element of L2 teaching and learning, particularly how accuracy can be honed by corrective feedback. However, there is some debate around this issue, with some who claim that corrective feedback does not necessarily increase accuracy (Kepner, 1991; Truscott, 1996), while others (Bitchener, 2008; Ferris, 1999) claim that it can, and that criticisms against it are premature and exaggerated. Writing accuracy came up in regards to interactive fiction, when students during the focus group were asked what ways they felt interactive fiction texts could assist in ESL learning. One responded: “If you don’t write it correctly it doesn’t work, like the game is not gonna answer you so you have to find a good way of typing words”. Given its reliance on lexical based interaction (interactive fiction is controlled by typing commands, as opposed to using a point and click or WASD³⁶ control interface), interactive fiction may be an effective genre of digital literature to help ESL students achieve accuracy in reading and writing.

Ideally, more could be done to improve the second language learning possibilities when using digital games and digital literature. However, one significant problem is the concern of explicitly teaching ESL in the classroom when English L1 learners are present. It is important to note that when this study was first conceived, it was to be conducted in a Francophone college in an ESL course. However, infrastructure issues in relation to the computer labs of the nearby Francophone college as well as scheduling issues were too burdensome to overcome. Also, and perhaps more importantly, I had gained employment at the college where the study took place

³⁶ A WASD interface refers to the letters on the keyboard, where ‘W’ is usually dedicated to moving forward in a digital game, ‘A’ is to move left, ‘S’ is to go backward, and ‘D’ is to move right.

and decided to conduct it with my students at that school. Given that this is an English language College, providing ESL learning in what are supposed to be English first language classrooms is not explicitly within the college, nor the department's, purview. Nevertheless, the reality, particularly for this college (arguably more than other Anglophone colleges in the province given the seemingly higher number of Francophones attending) is that second language learners attend specifically to improve their English. Yet, it can be argued, and was demonstrated above, that this the technology discussed in this dissertation, has the potential to provide unique, implicit, individual affordances to improve language, which can sidestep the problem of explicit L2 teaching while many L1 students present are in class. From the importance of lexical accuracy to interaction with the text, digital games and digital literature can open many opportunities for language learning, even in an English first language classroom, for second language learners.

1. SUMMARY OF FINDINGS AND DISCUSSION

The purpose of this chapter was to expand upon some of the pertinent literacies and themes mentioned in the previous chapter in order to explicate how the two objectives were attained. As demonstrated above, the works of digital games and digital literature provided students with a number of experiences that, in some ways relate to their digital practices, and in others, allowed them to be self-reflexive about technology, different discourses, and the role of digital and social media. Moreover, the role of the pedagogical design was interrogated, as each step was presented as providing a framework for teaching, yet at the same time the difficulties and challenges around each step was presented above.

Aspects of L2 teaching and learning were also addressed above, given that they specifically relate to objective two. Overall, elements of L2 teaching and learning were limited in

that they were not necessarily expanded upon during the study. In other words, there could have been opportunities for more in-depth and effective L2 teaching and learning, yet given that this course was not an L2 course, it was deemed inappropriate to dedicate time to explicit L2 teaching and learning. However, this will be further discussed in the next section.

Perhaps the largest overlying theme throughout the study is how these interactive, digital texts allowed students to experience and embody, through interactivity, many of the concepts, themes, they would normally encounter, via more passive media such as traditional print literature. Yet, what is unique about the texts used in this course, is perhaps best articulated by Gee (2007) when he claims that “video games have an unmet potential to create complexity by letting people experience the world from different perspectives” (p. 158) and in many ways, this was evident throughout this study. All of these considerations are illustrated in the below figure (figure 15).

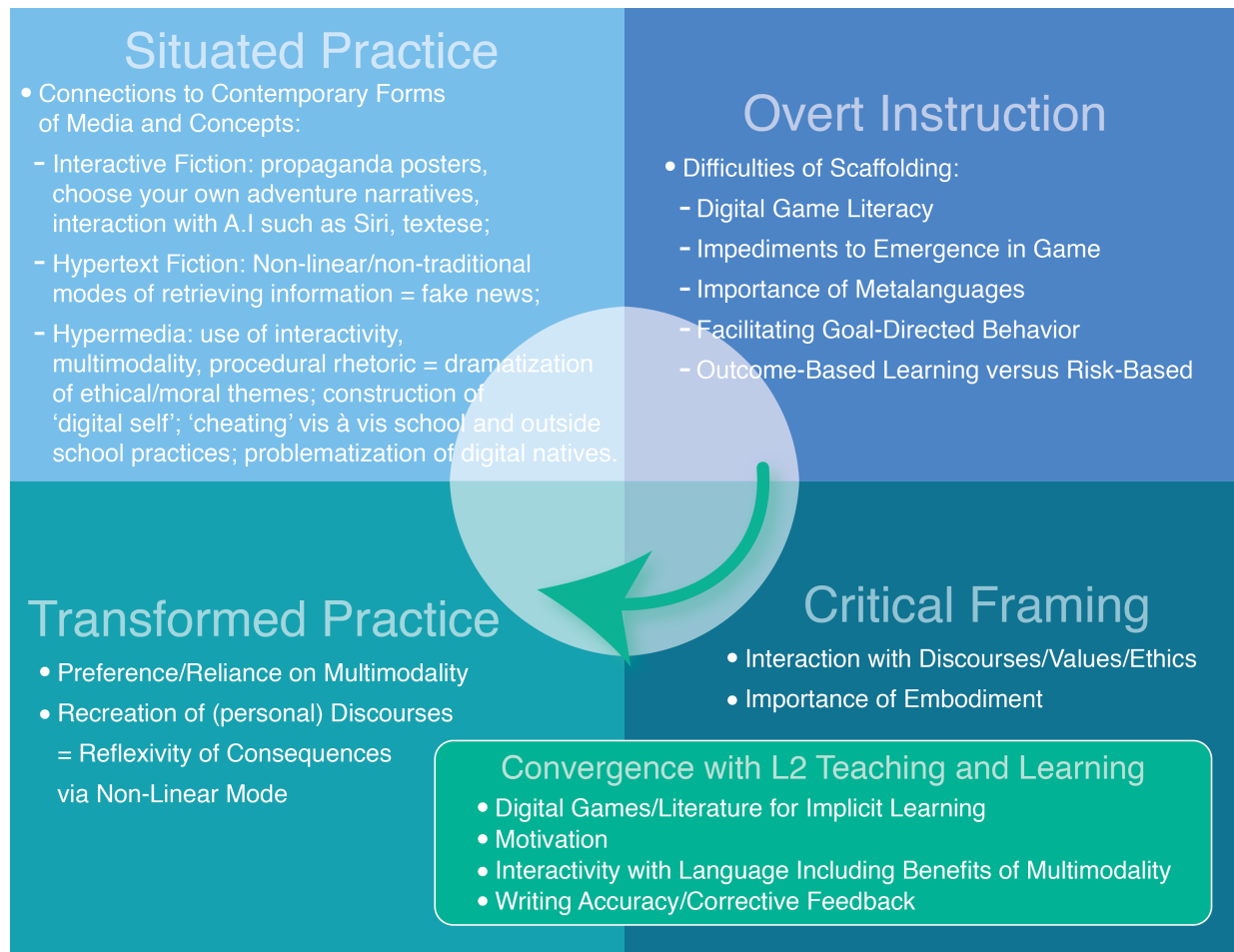


Figure 15. Summary of Findings and Discussion

CONCLUSION

Because all studies in the social sciences are centred on human phenomena, it is important to be aware of the limitations and constraints human researchers impose and produce as subjects on educational research. Thus, it is important to reflect upon such limitations, in that they will affect future studies and possibly pedagogy. This final section will present concluding remarks about some of the limitations as well as future considerations for studies such as the one presented here. The section will begin with comments on issues related to the sociocultural elements of the study, then will discuss the limitations of the research and finally, will focus on considerations for future studies. The purpose of this is to produce a guide for future researchers and pedagogues.

1. LIMITATIONS

1.1. Sociocultural Underpinnings

Perhaps the most important element that informed this study is the sociocultural underpinnings of the study's framework. Indeed, as was demonstrated in the first two chapters, much of the theoretical and conceptual work that informed this study was heavily based in a sociocultural theory of language and literacy learning, particularly evident given the study's reliance on the New London Group's (1996) framework for multiliteracy development. In explaining their framework, the New London Group posit that "human knowledge is initially developed not as 'general and abstract', but as embedded in social, cultural, and material contexts" (p.82). Such an analysis is comparable to scholars working in digital games for education, such as Squire (2008), who argues for the importance of recognizing that game playing and game interpretation occurs in communities and that each community dictates and privileges their own

criteria for how to interpret games (p. 648). For the purpose of this study, the community or culture focused on here was that of the classroom and the study was conceived by a teacher to both highlight particular literacies, but also to ensure students achieve the course objectives through these games. Thus, it is important to reflect upon the ways in which this contingency affected the study. There are a number of ways to analyse this, but perhaps the simplest way is to divide them in to quantitative and qualitative aspects.

1.2. Quantitative Limitations

Quantitative aspects refer to the ways in which it might be possible to tie specific quantifiable effects to the teaching and studying of digital literature and games in the classroom. A simple, yet significant, example of this was time. The time the students were allocated to play, whether in the classroom or at home, had significant implications for the study and the teaching of this material. For instance, given that the students were restricted in the amount of time they could play a game in the classroom, it might have affected the results in that not everyone had enough time to complete the game within the prescribed time. A specific example of this occurred with *The McDonald's Videogame* when, after the prescribed time, students continued to play, despite after I had told them to stop playing. Conversely, when they were at home, they presumably had much time to play yet it is not known how much they played. Despite the fact that the students were given their list of games to choose from during the first week of the study, most of the students, revealed to me in private conversation that they did not purchase their game until the final week. Also, given that most information needed for their analysis (plot summary, characters, thematic interpretation, etc.) of these games can be found online, it is not clear how much time they spent playing to thereby develop their critical comments and how much they

“cheated” in more traditional ways and thereby avoided being interactive or benefitting from multimodal features and experiences.

Another aspect of the study that related to time was the hypertext narrative creation. Many of the students were able to create rich narratives with the hypertext narrative creation tool, *Twine*. However, some students mentioned having difficulty getting started and had little time to create effective narratives. Moreover, some students found the marks dedicated to the evaluation (5% of total course grade) to be too low in relation to the work put in, and they were correct; I had not considered the amount of time and work some would put in. Furthermore, I had also miscalculated the amount of effort and engagement students demonstrated in this activity in that they were very much engaged in expressing their own personal issues, achievements, and challenges through this form of interactive narrative. Given that they were able to think through consequences and present them coherently in a narrative provided intrinsic affordances towards self-reflexivity, as discussed in the previous chapter.

Time constraints had clear effects on the students’ ability to effectively work on their hypertext narratives, but also on the amount of time allocated to the works of digital literature and digital games. Students were exposed to a number of works throughout the course in the computer lab. My initial thinking was that having the students see at least two works from each subgenre of digital literature would give them a basis for comparative analysis. However, it may have been more effective to let them spend more time on one text, given the time allocated. Also, the number of digital games that students were to choose from may be worth revising. Since conducting the study, comparable studies such as the one done by Darvasi (2016), highlight the advantages of having all of the students play one game and provide analysis and interpretation in

the class together. During his study, Darvasi was able to demonstrate how *Gone Home*, like other narrative-based games, serves as an effective example of literature in an English first language classroom, one that particularly matches the curriculum of his classroom. Having read his study after conducting my own made me question whether having students choose their own game was an effective choice and perhaps having all the students play one game would have allowed them to see multiple interpretations. However, it was my belief that allowing the students to choose their own game from a variety of different game genres may appeal more to their motivation, rather than being forced to play one game.

1.3. Qualitative Limitations

Darvasi's study was not the only text that made me reflect on different aspects of the project, particularly when looking at more qualitative aspects. I am referring here primarily to the quality of the teaching and ways students are able to use, and negotiate meaning with, digital literature and digital games to articulate various literacies. One limitation in the study was that there were not enough situations created to allow students to negotiate meaning among themselves (i.e. socially), especially since data that demonstrates students articulating multiliteracy development was only minimally gathered on the group level. In other words, how meaning making was established and negotiated through social processes and the sociocultural aspects of multiliterate practices and articulations could have been better documented in this study. Though there were some interesting examples of sociocultural language learning, for example when one student preferred asking another student the meaning of a word rather than look online on the computer directly in front of them, there could have been more rich examples and more effective data collection techniques used to observe the students negotiate in groups.

However, when one is both a teacher and a researcher at the same time it is immensely difficult to maintain the responsibilities of both roles.

Despite the lack of scholarship on how to overcome the challenges of being a researcher-practitioner when using digital games and digital literature, there have been some interesting texts published after the time that this study was conducted that demonstrate rich examples of how to use digital games in the classroom. Of particular interest is Farber's (2018) text which details the work of similar researcher-practitioners such as Darvasi, mentioned above, who have used narrative-based games to teach English literature and Humanities courses. Games like *Her Story*; *Walden, A Game*; *The Walking Dead*; and *This War of Mine* have all appeared in Farber's text along with teacher discussions as to how these games were integrated into curricula. Similarly, Katrin Becker's book *Choosing and Using Digital Games in the Classroom* (2017) would have been immensely helpful in preparing this study. Becker's text expertly highlights the learning principles underpinning DGBL, the advantages/disadvantages of using COTS games in the classroom, and a significant number of game-based lessons. Having had more resources such as these, including accounts of the different ways one can approach the teaching of literary or narrative-based games, may have had a significant effect on the present study as it might have assisted my planning on how to teach these games, what literary elements to highlight more importantly, how to appeal to students' different literacies that students might have enacted. Indeed, as the scholarship around digital games and digital literature progresses, challenges one may encounter in teaching these texts should likely diminish, allowing for more effective teaching and planning.

Considering the particular ways the games were discussed and taught relates to another element of importance to consider which is the dialogical process around a given game. As mentioned above, one of the perceived challenges of the study was that the students may not have had enough time to play and properly absorb the games and their elements. Accordingly, there could have been more time given to dialogical, iterative communication between myself as well as the students regarding the game. Similar concerns have been brought up by teachers like Husoy and Staaby (as discussed in Farber, 2018) who have used games like *The Walking Dead* and *This War of Mine* to teach ethics and morals. The two pedagogues discuss the importance of a pendulum process, which they call the Husoy/Staaby pendulum. This process emphasizes the importance of going back and forth between play and reflective discussion in the classroom. Such a process is crucial to the instructors, given that simply having the students play the game without this aspect questions the necessity of the instructor:

The perception of most teachers [...] is that games are somehow ‘learn-y’. Plop the kids in front of these fantastic games and there will be these learning situations. They [students] will grow and develop all kinds of skills. But as a teacher, that whole thought doesn’t appeal to me at all. If that was what we were using games for, then the teacher isn’t necessary. Then why not just have students play fantastic games in a room without a teacher? (Farber, 2018, p. 216).

Indeed, the way games are discussed in the classroom is crucial. And to a certain extent, this was done throughout the study. As detailed above, frequent discussions took place after most games. However, these discussions often were done in small groups and students reported back by writing a word document. Granted, I would often discuss the students’ results the next class, but

not always. Doing this could have hindered significant learning, not to mention the iterative process of returning to the game after a discussion about particular game elements. Given that the reflective process was an important element in the study in that having the students become self-reflexive about concepts learned from the games and about technology itself, it might have been valuable to foment this process more effectively in the classroom.

If students' reflective practices were an important part of this study, they were also important for the researcher, myself. Reflecting on practice has been a crucial element in education, particularly since the influential work of particular theorists (Brookfield, 1995; Korthagen & Vaslos 2005; Schön, 1983) who have argued for the importance of reflection in action, defined as reflecting on teaching practices while teaching a lesson, and reflection on action, defined as reflection on teaching practices after the lesson. In relation to digital gaming, reflection both in - and on - action are crucial to the success of teaching, especially when dealing with technology. As mentioned in this study, the introduction of technology into the classroom brings with it significant advantages, but also presents challenges. Being able to reflect in action, and find ways to troubleshoot when difficult situations arise are primordial when using technology.

1.4. Struggling with the Conventions of DBR.

Reflecting on not only action but also the study itself was an important element. Given that the study was conceived using a Design Based Research (DBR) design framework, reflection, especially after each iteration, was crucial. As discussed in the methodology section, DBR requires a number of iterations to improve upon a teaching framework. Indeed, one significant challenge was not only preparing each iteration but also analysing the data from each previous

iteration and adjusting the next one before teaching began. As was evident in the data analysis, nominal modifications to each iteration were implemented, but it is apparent that more time between each iteration would have greatly benefited the study. For instance, more time to reflect upon how to improve the design would have been beneficial, but more importantly, allowing those changes to emerge holistically into the teaching of the course could have benefitted teaching. This might have led to more impactful learning, for as Barab and Squire's (2004) claim "design-based research that advances theory but does not demonstrate the value of the design in creating an impact on learning in the local context of study has not adequately justified the value of the theory" (p. 6). Indeed, allowing for sufficient time, reflection, and reiterations could better demonstrate visible learning.

More importantly, the insufficient time allotted to analyze more data sets and modify the framework more significantly questions to what extent this study constitutes a legitimate DBR study. Indeed, it is a valid concern and one that was noticed during the study. However, given that DBR is still an emergent research design, there seems to be no tried and true method, nor stable consensus, on what constitutes its boundaries. Nevertheless, it is important to note that the principal aim was to implement the framework, see what literacies and concepts emerge, observe and document them, and modify the framework accordingly, though minimally. Similar challenges in regards to minimal iterations between data analysis have emerged in studies, such as the one by Meyer, Barré, Lefebvre, and Gandon, (2019) in which they developed a DBR framework to explore flipped classroom teaching through a videoconference technology. In their study, the authors noted that less time was taken to analyse the data after the second, and last, iteration (p. 204-205) but that more time would be taken for a third iteration which would thus comprise of a future study. Despite the fact that it did little to compromise the efficacy of the

study's results, this small mention highlights the important challenge in documenting the effects of a DBR study's iterations while not having the appropriate time to analyse all of the results. Regardless, in the view of transparency, it is important to articulate these challenges, and lacks, for future studies and other scholars who may be interested in using DBR in their research.

Finally, one significant absence in the implementation of this study in relation to the conventions of DBR relates to the collaborative nature of this project. As discussed in chapter three, one crucial element for effective DBR studies is the collaborative nature of the research, particularly among the researchers and participants. Indeed, as Sanchez and Monod-Ansaldi (2015) explain, collaboration within DBR is crucial to arrive at a concept they call 'praxéologies méta-didactiques', defined as as the practical and theoretical reflections that develop in a framework and as a result of effective collaboration (para. 70). However, the implication here appears to be in regards to studies in which there is both a separate research and practitioner (i.e. teacher). Given that I was both the research and practitioner, this was evidently impossible. That being said, integrating the students into a more collaborative role might have been a way to develop the collaborative element required in DBR. Of course, the students did collaborate in some ways, by their suggestions detailed in the post-study survey, but this is an admittedly weak form of collaboration compared to the ones intended by Sanchez and Monod-Ansaldi (2015) above. Thus, future iterations and formulations of such a study would need to rectify this problem and determine ways to better incorporate this significant element.

1.5. The Binaries of Identity

Obscuring the distinctions between certain terms and concepts has been a significant theme throughout this dissertation. The problematizing of distinctions emerging throughout this project, however, is not intended to support radical relativism or to nullify all distinctions or differences. Rather, it is to acknowledge the problematic characterizations of certain groupings and an attempt to ameliorate ways of understanding, and teaching, through nuance. The most evident distinction, which has significant implications for this specific teaching context, is one of L1 versus L2 learners. Given the context of an Anglophone college in a mostly Francophone region in Quebec that has a majority student population of Francophone learners, distinctions between not only identity between L1 and L2 learners, but how such a mixed classroom community should be taught effectively, emerged. In the proposed project, it became apparent through the data that digital literature and digital games can provide effective, implicit L2 teaching through its affordance of multimodality, interactivity, and situated meaning. These affordances allow for implicit teaching and learning of the language given that they did not necessarily need to be explicitly taught in the classroom, but to immerse themselves in the language on their own. Indeed, Chik discusses this above when she refers to “students’ pursuit of some leisure interest through a second or foreign language in digital environments in informal learning contexts, rather than for the explicit purpose of learning the language” (p.835). Moreover, these texts lend themselves to the ability for learners to engage in paratextual research, many of which feature multimodality (digital game walkthroughs) and human interaction, such as online communities, forums and message boards. These online communities may effectively nullify these problematic dualities, as Jenson and Lotherington (2011) claim, given that they do not acknowledge the “binary distinctions that mark insiders and outsiders in physical speech communities, where

sociopolitical concepts such as second language and foreign language have explanatory power” (p.233). Thus, it is because of such digital, interactive texts that L2 students are able to circumvent some of the problematic issues of learning literature in a L1 course.

Identity emerged also as a problematic binary in regards to how students identify with, or as, gamers. As emerged from the data, some students had negative perceptions of gamers and gaming culture. Indeed, this may have carried, and can carry, limitations to this and future studies. As mentioned above, Gee (2007) and Neville (2010) have argued quite persuasively toward the importance of taking identity into consideration in relation to digital games. This was an element that should have been considered, particularly as the NLG identify that in multiliteracy development competing discourses, and identities are often at odds and need to be negotiated (1996, p. 87). Assisting students in negotiating these identities, or their perceptions of different identities is an issue that can have crucial significance in similar studies of this nature.

1.6. The Binaries of Inside versus Outside School Practice

A variety of other binaries surfaced throughout this study that can have implications for future research as well as the teaching of digital games and digital literature. A prominent issue related to the sociocultural aspect of the study was the difference between outside of school practices versus inside school practices. Indeed, an assumption following this study was that many students engage with digital practices that are not represented inside school. An effective example of this might be when one student claimed in the focus group characterized the ways in which *Loss of Grasp* game mechanics symbolized the creation of her digital self on social media sites such as Facebook. The unique mechanics and affordances this digital text allowed for her to articulate a critical regard towards technology and social media sites. Other examples, such as

interacting with Siri were also effective in relating to the digital practices that many engage in outside of school communities to digital texts in the study. Yet digital practices are not the only types that are considered outside of school practices. The ways in which students search online and what sites they visit is an important issue in contemporary education. Though the common assumption is that digital natives are quite adept and savvy in so far as being able to access information, this study demonstrated that this point is more complex. Whether it is because of a perception of using cheats and walkthroughs in the classroom, or the disinterest to use these and complete a task on one's own, the issue appears more complicated than the simple outside versus inside school practices.

1.7. The Binaries of Digital Games and the Classroom Context

The context of using traditionally unconventional texts in traditional school classrooms is crucial for understanding digital games as works of art (or literature) and how they should be integrated into the classroom. From the standpoint of digital games as art, Consalvo's 2009 article "There Is No Magic Circle" is an effective argument for this point. Consalvo's article argues against the formalism apparent in academic game studies, by using the famous metaphor of Huizinga's influential text *Homo Ludens* (1937). In *Homo Ludens*, Huizinga analyses the role of play in culture, while also theorizing about the nature of games. Huizinga coins the term 'magic circle' which denotes the space one enters when playing a game, in which rules within such a game world – be it chess, tic tac toe, Ring Around the Rosey – are completely different from the rules of the outside world. Consalvo's allusion to Huizinga's text is used to counter such an analysis of games, by that they do indeed apply, but "in addition to, and in competition with, other rules and in relation to multiple contexts, across varying cultures, and into different groups, legal situations, and homes" (p.416). Here Consalvo argues that the context of game playing is as,

or if not even more, important. Such an understanding of the context of game play leads to an important element with the use of digital games within education. For studies such as this one it also has immense implications given that one of the challenges was to situate the study's objectives within the course curriculum. The challenge here was that for an English course at the college level, there are no explicit competencies tied to multiliteracies or particular literacies, except the development of critical thinking or critical analysis from an interpretation of a text, which could be tied to critical literacy. Thus, for studies that plan to use digital, interactive texts to engender multiliteracies, they need to be developed organically. That being said, perhaps by nature of their ability to engender such multiliteracies, they arguably have a better place in English and/or Humanities courses as this can be facilitated through these convergent texts – texts that can be used as an artefact of literary analysis and its engagement/activity/interaction explicitly demand self-reflexivity of technology and the digital.

2. RECOMMENDATIONS AND FURTHER RESEARCH

2.1. Recommendations

Digital games and digital literature function in unique ways and because of this have an important place in the English classroom. This is not to say that they should replace all modes and forms of literature as cultural artefacts. They should, however, be equally considered among these texts so that students may have the opportunity to use, create, and analyse digital interactive texts, which can engage them in more contemporary practices and literacies. However, clearly the teaching and use of these texts, because of the technological medium that they occupy, demand much reflection before they are to be integrated into the classroom. Perhaps because of the multiple affordances they engender, they carry with them equally multiple complexities. But

this should not be considered as a reason not to use them, but rather, one must be extremely self-reflexive about how to integrate them.

To better educate teachers on how to integrate digital games in the classrooms, universities should begin considering integrating digital game based learning into their teacher training programs. Pre-service, as well as in-service teachers, can benefit from courses on how to choose and teach digital games as per their respective disciplines. Indeed, research over the last ten years points to the importance of properly preparing future teachers to integrate digital games (Baek, 2008; Becker, 2005; Kenny & McDaniel, 2011). Moreover, Takeuchi and Vaala (2014) found that, in surveying 700 teachers in K-8 schools about digital game use in the classroom, 33% had found about using digital games in the classroom with another teacher coach or supervisor, 23% found out about digital games themselves, whereas 17% had been introduced to them through in-service professional development and only 8% from a pre-service teaching program³⁷. Given the comparative lack of digital games education in teaching training programs and professional development, it would be worthwhile to consider integrating such courses into current programs or at the very least, research and investigate its pertinence.

2.2. Teacher Education Programs

With the above considerations, the suggestions for further research take on a four-fold imperative. The first research imperative deals with research into current teacher training programs. In this regard, the first step would be to focus on programs (if there are any) that include digital games based learning. Questions to consider might be: what types of games are

³⁷ The rest of the responses to the survey question break down as follows: 11% first learned about using digital games in the classroom from a conference they attended; 7% from their own students; 1% from an online resource; and 1% from other (p.18).

being used (serious games vs. COTS games) and used to teach which subjects or disciplines? Do the approaches used in these courses allow teacher trainers to think critically about digital games in the classroom, or are games simply used to present the material in fun and motivating ways? If there are little to no examples of teacher training programs that include digital games based pedagogy, it would be interesting to further investigate the willingness of teacher education programs across a number of universities (throughout the province or country) to integrate digital, games-based pedagogy. Finally, and more particularly, it might also be interesting to investigate pre-service (or in-service) teachers' perceptions, interest, and familiarity with digital games in learning contexts.

2.3. Digital Games in Contemporary Teaching

The second research imperative relates to the more specific context of digital games in current teaching situations. Being a teacher, I have been approached by a number of colleagues from my institution, as well as teachers from other institutions, who have demonstrated an interesting integrating digital games in their classes. Working with these colleagues, a future research project may be to create a multiple iterative research design (over multiple semesters) to interrogate the teaching and learning affordances a given game provides within the particular subject or discipline. This study has shown the strong potential for fostering unique learning possibilities but there is much that can be done through collaboration with students and teachers to further our collective knowledge in this field.

2.4. Digital Games and Second Language Teaching

Finally, the last research imperative concerns digital games' affordances for second language learners. With the research data detailed above in regards to the ways digital games may

afford effective second language learning, the next step would be to further explore this possibility. Having the opportunity to teach students in the unique context of an Anglophone college that admits a large number of second language learners, this may provide an interesting research context to further develop the ways digital games can implicitly assist second language learners, especially those enrolled in English first language classrooms. Conversely, the fact that I have connections to a number of Francophone colleges in both rural and urban regions of Quebec, allows me the possibility to conduct complimentary research and studies on how digital games may affect second language learners in explicitly second language learning environments. Regardless of which research avenue is pursued, time is an important factor. The reason being is that, given such studies rely on ever-evolving technology, one needs to produce effective research at a quickened pace before said technologies become obsolete.

2.5. Literacy and the Post-human

Developments in literacy scholarship have often been informed by movements in other disciplines such as sociology, psychology, anthropology, and philosophy. As was discussed in chapter one, new literacy development largely grew out of a conceptualization of literacy that transitioned from a largely internal, biological, and cognitive understanding of literacy to what could be conceived of as an external, socio-cultural one. Recently, the proverbial pendulum has been swinging the other way towards - if not a rejection of the socio-constructivist approach - at the very least, a return to the physical and material. This is reflected in one of the more interesting turns in contemporary philosophy towards new materialism, a perspective that rejects the socio-constructivist view and linguistic turn that dominated much of the social sciences and humanities, respectively. Thus, new materialism attempts to reclaim the importance of the physical, or material, world in understanding reality as one that is not purely socially constructed

and that opposes the anthropocentrism in contemporary philosophy. In this vein, literacy scholars have been grappling with the influence of this philosophical perspective and the ways it may inform literacy pedagogy (Kuby, & Rowsell, 2017; Toohey, Dagenais, Fodor, Hof, Nuñez, Singh, & Schulze, 2015) via its reclamation of material objects and their influence on the ways literacy is constructed. However, one might wonder to what extent such a movement is truly posthumanist, considering the importance of the social still implied when claiming that: “languages and literacies and people and their activities and other materials accompany one another, and are entangled in *sociomaterial* [emphasis added] assemblages that rub up against one another in complex and as yet unpredictable ways” (Toohey, Dagenais, Fodor, Hof, Nuñez, Singh, & Schulze, 2015, p.461). One may wonder if it might possible, or productive, to go further down the materialist turn, all the way into speculative realism and object oriented ontology (Bryant, Harman & Srnicek, 2011) which, over the past ten years, have gained a strong influence in contemporary philosophy. These theorists underline an important, and at times, radical conceptualization of what might be conceived as a post-human ontology. Such a perspective, as Harman (2005) argues, considers objects as never fully understood, or exhausted, by their relations to humans or even other objects; there is always something withdrawn and inaccessible to us. This is the central tenet to object oriented ontology; a revolutionary epistemological turn that has gained considerable ground in philosophy, and has begun to impact other disciplines. If contemporary literacy scholarship continues to venture down the materialist road, it should thus engage with this ontology.

Interestingly, object-oriented ontology’s displacement of the human as central to an understanding of reality has precedents in media and communication theory. As discussed above, technological objects radically alter the way we make sense of the world. Indeed, McLuhan’s

prescient claim of technology as a tool, which posited it as an extension of ourselves, remains pertinent: “The wheel is an extension of the foot, the book is an extension of the eye, clothing an extension of the skin, electric circuitry an extension of the central nervous system” (McLuhan, 1967/2001, p.40). More recently, Jean Baudrillard (2009) extended McLuhan’s reflections in observing humanity’s self-effacement in contemporary society, willingly replacing itself with technologies, and thus inviting our own obsolescence: “[B]odies would be merely the phantom limb, the weak link, the infantile malady of a technological apparatus that dominates us remotely” (Baudrillard, 2009, p.20). Despite the hyperbole of such claims, literacy scholars, particularly those integrating technologies, must take these philosophical currents into consideration. Therefore, literacy pedagogy must consider technology’s role in displacing – or replacing – humanity’s position. If contemporary new literacy scholarship is informed by a materialist, and as the above authors claim, a post-humanist turn, what does that mean for our critical perspective in regards to the integration of such technologies? How does our understanding of literacy development rely on new materialities, and technologies, that serve to resituate or replace, what is human? Grappling with these questions, theories, and concepts seems to be the crucial role literacy scholars must engage in, over the years to come.

REFERENCES

- Aarseth, E. (2004). "Genre trouble". *Electronic book review*, 3. 1-7.
- Abrams, S. (2015). Videogames and Literacies: Historical Threads and Contemporary Practices. In K. Pahl & J. Rowsell. (Eds.), *The Routledge Handbook of Literacy Studies*. (pp. 354-368). New York: Routledge
- Akkerman, S., Admiraal, W., & Huizenga, J. "Storification in History Education: A Mobile Game in and About Medieval Amsterdam", *Computers & Education*, 52, 2009, pp. 449–459.
- Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of Economic Perspectives*, 31(2), 211-36.
- Aldrich, C. (2004). *Learning by doing : A comprehensive guide to simulations, computer games, and pedagogy in e-Learning and other educational experiences*. New York: Wiley.
- Amiel, T., & Reeves, T. C. (2008). Design-based research and educational technology: Rethinking technology and the research agenda. *Educational Technology & Society*, 11(4), 29-40.
- Amini, T. (2017). "Video game stories still don't belong to you". *Mashable*. Retrieved From: <https://mashable.com/2017/05/26/choice-in-games/#aW2jOMDxdPqW>
- Anderson, B. (1983). *Imagined communities: Reflections on the origin and spread of nationalism*. London: Verso.
- Anderson, R.S. (Ed.). (2014). *Handbook of Research on Digital Tools for Writing Instruction in K-12 Settings*. IGI Global
- Anderson, L. W., Krathwohl, D. R., & Bloom, B. S. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational*

objectives. New York: Longman.

Anderson, T., & Shattuck, J. (2012). Design-based research a decade of progress in education research?. *Educational researcher*, 41(1), 16-25.

Apperley, T., & Walsh, C. (2012). What Digital Games and Literacy Have in Common: A Heuristic for Understanding Pupils' Gaming Literacy. *Literacy*, 46(3), 115-122.

Arikan, A. (2002). Critical Media Literacy and ESL/EFL Classrooms. *Transmediation in the Classroom: A Semiotics Based Media Literacy Framework*, 113-125.

Ascaron Entertainment. (2004). *Sacred*. Microsoft Windows.

Atkinson, D. (1997). A critical approach to critical thinking in TESOL. *Tesol Quarterly*, 71-94.

Audet, R. & Brousseau, S. (2011). Pour une poétique de la diffraction de l'oeuvre littéraire numérique : l'archive, le texte et l'oeuvre à l'estompe. *Protée*, 39(1), 9-22.

Bachimont B. (2007). *Ingénierie des connaissances et des contenus : le numérique entre ontologies et document*. Paris: Hermès-Lavoisier.

Baek, Y. K. (2008). What hinders teachers in using computer and video games in the classroom? Exploring factors inhibiting the uptake of computer and video games. *CyberPsychology & Behavior*, 11(6), 665-671.

Baillargeon, N. (2011). Liliane est au lycée. *Est-il indispensable d'être cultivé?*. Paris: Flammarion

Bailey, K. M. (1996). *Voices from the language classroom: Qualitative Research in Second Language Education*. Cambridge University Press.

Baker, C. (2001). Foundations of bilingual education and bilingualism (3rd ed.). Clevedon, UK: Multilingual Matters.

Balra, A. (1990). Language learning through computer adventure games. *Simulation & Gaming*, 21(4), 445-452.

- Bannert, M., & Mengelkamp, C. (2008). Assessment of metacognitive skills by means of instruction to think aloud and reflect when prompted. Does the verbalisation method affect learning?. *Metacognition and Learning*, 3(1), 39-58.
- Barab, S. A., Baek, E. O., Schatz, S., Scheckler, R., Moore, J., & Job-Sluder, K. (2002). Illuminating the braids of change in a web-supported community: A design experiment by any other name. *Manuscript retrieved February, 2, 2004*.
- Barab, S. A., Gresalfi, M., & Ingram-Goble, A. (2010). Transformational play: Using games to position person, content, and context. *Educational Researcher*, 39(7), 525-536.
- Barab, S., & Squire, K. (2004). Design-based research: Putting a stake in the ground. *The Journal of the Learning Sciences*, 13(1), 1-14. Retrieved June 21, 2004 from <http://website.education.wisc.edu/kdsquire/manuscripts/jls-barab-squire-design.pdf>
- Baumann, J.F., Jones, L.A., & Seifert-Kessell, N. (1993). Using think alouds to enhance children's comprehension monitoring abilities. *The Reading Teacher*, 47, 184-193.
- Baudrillard, J. (2009). *Why hasn't everything disappeared?*. Chicago: University of Chicago Press.
- Baudrillard, J. (1979). *De la séduction*. Paris: Éditions Galilée.
- Baylen, D. M., & D'Alba, A. (Eds.). (2015). *Essentials of Teaching and Integrating Visual and Media Literacy: Visualizing Learning*. Springer.
- Beavis, C., O'Mara, J. & McNeice, L. (2012). *Digital games: Literacy in action*. South Kent, Australia: Wakefield.
- Beavis, C., Walsh, C., Bradford, C., O'Mara, J., Apperley, T., & Gutierrez, A. (2015). 'Turning around' to the affordances of digital games: English curriculum and students' lifeworlds. *English in Australia*, 50(2), 30.

- Becker, K. (2007). Digital game-based learning once removed: Teaching teachers. *British Journal of Educational Technology*, 38(3), 478-488.
- Beechler, S., & Williams, S. (2012). Computer assisted instruction and elementary ESL students in sight word recognition. *International Journal of Business and Social Science*, 3(4).
- Bélisle, C. (2011). Du papier à l'écran: lire se transforme. *Lire dans un monde numérique*, 143.
- Bell, N. (2005). Exploring L2 language play as an aid to SLL: A case study of humour in NS-NNS interaction. *Applied Linguistics*, 26, 192–218.
- Bell, N. (2006). Interactional adjustments in humorous intercultural communication. *Intercultural Pragmatics*, 3, 1–28.
- Bell, N., Skalicky, S., & Salsbury, T. (2014). Multicompetence in L2 Language Play: A Longitudinal Case Study. *Language Learning*, 64(1), 72–102. <https://doi-org.ezproxy.usherbrooke.ca/10.1111/lang.12030>
- Benson, P., & Chik, A. (2011). Towards a more naturalistic CALL: Video gaming and language learning.
- Bereiter, C., & Bird, M. (1985). Use of thinking aloud in identification and teaching of reading comprehension strategies. *Cognition and Instruction*, 2, 131–156.
- Bitchener, J. (2008). Evidence in support of written corrective feedback. *Journal of Second Language Writing*, 17, 102–118.
- Birch, D., & Sankey, M. (2008). Factors influencing academics' development of multimodal distance education courses. *International Journal of Educational Development using ICT*, 4(1).
- Birk, M. V., Atkins, C., Bowey, J. T., & Mandryk, R. L. (2016, May). Fostering intrinsic

- motivation through avatar identification in digital games. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 2982-2995). ACM.
- Bogost, I. (2007). *Persuasive Games: The Expressive Power of Videogames*. Cambridge: MIT Press.
- Boluk, S., & LeMieux, P. (2013). Dwarven epitaphs: Procedural histories in Dwarf fortress. In N.K. Hayles and J. Pressman. *Comparative Textual Media*. University of Minnesota Press. 125-154.
- Borko, H., Whitcomb, J., & Liston, D. (2009). Wicked problems and other thoughts on issues of technology and teacher learning. *Journal of Teacher Education*, 60 (1), 3-7.
- Boulay, S., Maroquène, G., & Roger, C., (2010). Les fanfictions. Un renouvellement du statut de l'auteur et des habitudes de lecture. *Études fanfiction*. Retrieved from http://etude.fanfiction.free.fr/master_definition.php
- Bourgonjon, J., Valcke, M., Soetaert, R., & Schellens, T. (2010). Students' perceptions about the use of video games in the classroom. *Computers & Education*, 54(4), 1145-1156.
- Boyle, E. A., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., Lim, T., Ninaus, M., Ribeiro, C., & Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. *Computers & Education*, 94, 178-192.
- Bridge, J. R. (2012). Motivation and Technology for Quebec CEGEP ESL Classes. *Electronic Thesis and Dissertation Repository*. 699. Retrieved from: <https://ir.lib.uwo.ca/etd/699>
- Bridge, C.A., Winograd, P.N. and Haley, D. (1983) Using predictable materials vs. preprimers to teach beginning sight words. *The Reading Teacher* 36, (pp. 884-891).

- Broner, M. A., & Tarone, E. (2001). Is it fun? Language play in a fifth-grade Spanish immersion classroom. *Modern Language Journal*, 85(3), 363–379. <https://doi-org.ezproxy.usherbrooke.ca/10.1111/0026-7902.00114>
- Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Francisco, CA: Jossey-Bass.
- Brown, H. D. (2015). *Teaching by principles*. Englewood Cliffs, NJ: Prentice Hall.
- Bryant, L, Harman, G, Srnicek, N. (2011). *The Speculative Turn: Continental Materialism and Realism*. Melbourne, Australia: re.press.
- Burbules, N. (2002). The web as a rhetorical place. In I. Snyder (Ed.), *Silicon literacies: Communication, Innovation and Education in the Electronic Age*. (pp.75-84). London: Routledge.
- Bushman, B. J., Gollwitzer, M., & Cruz, C. (2015). There is broad consensus: Media researchers agree that violent media increase aggression in children, and pediatricians and parents concur. *Psychology of Popular Media Culture*, 4(3), 200.
- Butler, Allison, "Unvarnished truth of social media: Why critical media literacy is needed (now more than ever)" (2017). *Critical Media Literacy Conference*. 20.
<http://digitalcommons.georgiasouthern.edu/criticalmedialiteracy/2017/2017/20>
- Bygate, Skehate & Swain, (2001). *Researching Pedagogic Tasks: Second Language Learning, Teaching and Testing*. London: Routledge
- Caillois, R. (1961) *Man, Play, and Games*. Urbana: University of Illinois Press.
- Campbell, A. (2014). *Inkubus*. Dreaming Methods. Retrieved from
<http://dreamingmethods.com/inkubus/>
- Campbell, A. (2010). *Nightingale's Playground*. Dreaming Methods. Document
Retrieved from <http://nightingalesplayground.com/>

- Carlisle, A. (2010). Readling logs: An application of reader-response theory in EFL. *ELT Journal*, 54 (1), 12-19
- Carrell, P. L., Pharis, B. G., & Liberto, J. C. (1989). Metacognitive strategy training for ESL reading. *Tesol Quarterly*, 647-678.
- Carrington, V. (2005). The uncanny, digital texts and literacy. *Language and Education*, 19(6), 467-482.
- Carter, S. P., Greenberg, K., & Walker, M. S. (2017). The impact of computer usage on academic performance: Evidence from a randomized trial at the United States Military Academy. *Economics of Education Review*, 56, 118-132.
- Casanave, C.P. (1988). Comprehension monitoring in ESL reading: A neglected essential. *TESOL Quarterly*, 22, 283–302.
- Castro, J. C., Lalonde, M., & Pariser, D. (2016). Understanding The Im/mobilities of Engaging At-Risk Youth through Art and Mobile Media. *Studies in Art Education*.
- Chee, Y. S. (2007). Embodiment, embeddedness, and experience: Game-based learning and the construction of identity. *Research and Practice in Technology Enhanced Learning*, 2(01), 3-30.
- Chen, D., & Gu, P. L. (2004). Causality analysis of social balkanization of information technology [J]. *Studies In Science of Science*, 1, 003.
- Chen, H. H. J., Chen, M. P., Chen, N. S., & Yang, C. (2012, October). Pre-service teachers' views on using adventure video games for language learning. In *Proceedings of the 6th European Conference on Games Based Learning* (pp. 125-130).
- Chen, H. J. H., & Yang, T. Y. C. (2013). The impact of adventure video games on foreign language learning and the perceptions of learners. *Interactive Learning Environments*, 21(2), 129-141.

- Chik, A. (2014). Digital gaming and language learning: Autonomy and community. *Language Learning & Technology*, 18(2), 85-100.
- Cho, B-Y. (2014). Competent Adolescent Readers' Use of Internet Reading Strategies: A Think-Aloud Study. *Cognition and Instruction*, 32 (3), 253-289.
- Chun, C.W. (2009). Critical Literacies and Graphic Novels for English-Language Learners: Teaching Maus. *Journal of Adolescent & Adult Literacy*, 53(2), 144-153.
- Citton Y. (2014). *Pour une écologie de l'attention*. Paris, Le Seuil.
- Cohen, L. (2007, April 5). Social scholarship on the rise. Retrieved October 7, 2008, from http://liblogs.albany.edu/library20/2007/04/social_scholarship_on_the_rise.html
- Common Sense Media. (2015). The Common Sense Census: Media Use by Teens and Tweens Report. <https://www.commonsensemedia.org/research/the-common-sense-census-media-use-by-tweens-and-teens>
- Consalvo, M. (2009). There is no magic circle. *Games and culture*, 4(4), 408-417.
- Consalvo, M. (2007). *Cheating: Gaining advantage in videogames*. Cambridge: MIT Press.
- Corporation for Public Broadcasting. (2002). *Freaky Flakes*. Self-published
- Cook, G. (2000). *Language play, language learning*. Oxford, UK: Oxford University Press
- Cooper, N., Lockyer, L., & Brown, I. (2013). Developing multiliteracies in a technology mediated environment. *Educational Media International*, 50(2), 93-107.
- Cope, B., & Kalantzis, M. (2000). *Multiliteracies: Literacy learning and the design of social futures*. New York: Routledge.
- Coiro, J., Knobel, M., Lankshear, C., & Leu, D. J. (Eds.). (2008). *Handbook of Research on New Literacies*. New York: Routledge.
- Cook, V. (1994). The metaphor of access to Universal Grammar. In N. Ellis (Ed.), *Implicit and explicit learning of languages* (pp. 477–502). London: Academic Press.

- Cornillie, F., Jacques, I., De Wannemacker, S., Paulussen, H., & Desmet, P. (2011). Vocabulary treatment in adventure and role-playing games: A playground for adaptation and adaptivity. In. Wannemacker, S. Clarebout, G., De Causemacker, P. (Eds.) *Interdisciplinary Approaches to Adaptive Learning. A Look at the Neighbours* (pp. 131-146). Berlin: Springer Berlin.
- Cornillie, F., Thorne, S. L., & Desmet, P. (2012). ReCALL special issue: Digital games for language learning: challenges and opportunities. *ReCALL*, 24(03), 243-256.
- Cover, R. (2012). Performing and undoing identity online: Social networking, identity theories and the incompatibility of online profiles and friendship regimes. *Convergence*, 18(2), 177-193.
- Creswell, J. (2014). *Research design: Qualitative, quantitative and mixed methods approaches*. London: Sage.
- Crisfield, E. & White, J. (2012). Motivation and SLA: Bringing it into the Classroom. In M. Pawlak. (Ed.). *New Perspectives on Individual Differences in Language and Teaching*. (pp. 217-231). Berlin: Springer.
- Crozat, S., Bachimont, B., Cailleau, I., Bouchardon, S., & Gaillard, L. (2011). Éléments pour une théorie opérationnelle de l'écriture numérique. *Document numérique*, 14(3), 9-33.
- Cummins, J. (1996). *Negotiating identities: Education for empowerment in a diverse society* (pp. 1-368). Ontario, CA: California Association for Bilingual Education.
- Daemmrich, I. G. (2007). Novices Encounter a Novice Literature: Introducing Digital Literature in a First-Year College Writing Class. *Teaching English In The Two-Year College*, 34(4), 420-433.

- Daiute, C., Campbell, C. H., Griffin, T. M., Reddy, M., & Tivnan, T. (1993). Young authors' interactions with peers and a teacher: Toward a developmentally sensitive sociocultural literacy theory. *New Directions for Child and Adolescent Development*, 1993(61), 41-63.
- Dakers, J. R. (2006). *Defining technological literacy: Towards an epistemological framework*. New York: Palgrave Macmillan.
- Darvasi, P. (2016). Gone home and the Apocalypse of high school English. *Teacher pioneers: Visions from the edge of the map*. Pittsburgh, PA: ETC Press.
- De Castell, S., Flynn-Jones, E., Jenson, J. & Bergstrom, K. (2017). Learning Links: A study of narrative learning through games with The Legend of Zelda: Windwaker. In *Proceedings of the 50th Hawaii International Conference on Systems Science*.
- Dede, C., Nelson, B., Ketelhut, D. J., Clarke, J., & Bowman, C. (2004, June). Design-based research strategies for studying situated learning in a multi-user virtual environment. In *Proceedings of the 6th international conference on Learning sciences* (pp. 158-165). International Society of the Learning Sciences.
- deHaan, J.W. (2013). *Video Games and Second Language Acquisition: Six Genre Case Studies*. Common Ground Publishing.
- Dennis, L. (1970). Play in Dewey's theory of education. *Young Children*, 25(4), 230-235.
- Derrida, J. [1966] 1978. Structure, Sign, and Play in the Discourse of the Human Sciences. In *Writing and Difference*. Trans. A. Bass, 278-293. Chicago: University of Chicago Press.
- The Design-Based Research Collective. (2003). Design-based research: An emerging paradigm for educational inquiry. *Educational Researcher*, 5-8.
- Dewey, J. (1913). Play. *A cyclopedia of education*, 4, 725-727.
- Doering A., R. Beach & D. O'Brien. (2007). Infusing Multimodal Tools and Digital Literacies into an English Education Program, *English Education*, 40(1),41-60.

- Dörnyei, Z. (2009). The L2 Motivational Self System. In Z. Dörnyei, K. Csizer (Eds.) *Motivation, Language Identity and the L2 Self*. Multilingual Matters.
- Dörnyei, Z. (2001). New themes and approaches in second language motivation research. *Annual Review of Applied Linguistics* 21. 43–59.
- Dörnyei, Z., & Ushioda, E. (Eds.). (2009). *Motivation, language identity and the L2 self* (Vol. 36). Multilingual Matters.
- Drouin, M. A. (2011). College students' text messaging, use of textese and literacy skills. *Journal of Computer Assisted Learning*, 27(1), 67-75.
- Early, M., & Marshall, S. (2008). Adolescent ESL students' interpretation and appreciation of a case study of multimodality. *Canadian Modern Language Review*, 64(3), 377-397.
- Eisenberg, M. B., Lowe, C. A., & Spitzer, K. L. (2004). *Information literacy: Essential skills for the information age*. Westport: Greenwood Publishing Group.
- Eisner, E.W. (2001). Concerns and Aspirations for Qualitative Research in the New Millennium. *Qualitative Research*, 1(2), 135-145.
- Elharrar, Y. (2006). Teacher assessment practices and pereceptions: the use of alternative assessments within the Québec education reform. Unpublished thesis. Montreal: University du Québec à Montréal. 120p.
- Ensslin, A. (2014). *Literary Gaming*. Cambridge: MIT Press.
- Ensslin, A. (2006). Literary hypertext in the foreign language classroom: A case study report. *Language Learning Journal*, 33(1), 13-21.
- Ensslin, A. & Krummes, C. (2013) Electronic interaction and resources. In. J. Herschensohn & M. Young-Scholten (Eds.), *The Cambridge Handbook of Second Language Acquisition*. (p.292-312). Cambridge: Cambridge University Press.

Entertainment Software Association of Canada. (2016). *Essential Facts 2016*. Retrieved from

Entertainment Software Association of Canada website: http://theesa.ca/wp-content/uploads/2016/11/2016_booklet_Web.compressed2.pdf

Entertainment Software Association of Canada. (2011). *Essential Facts 2011*. Retrieved from

Entertainment Software Association of Canada website: <http://theesa.ca/wp-content/uploads/2015/08/Essential-Facts-2011-EN.pdf>

Eskelinen, M. (2001). "The Gaming Situation." *Game Studies*, 1(1), Retrieved from

<http://gamestudies.org/0101/eskelinen/> (<http://gamestudies.org/0101/eskelinen/>) .

European Commission, (n.d.) Media Literacy. *Culture: Supporting Europe's Cultural*

and Creative Sectors. Retrieved from

http://ec.europa.eu/culture/policy/audiovisual-policies/literacy_en.htm

Fairclough, N. (1995). *Critical discourse analysis: The critical study of language*. London:

Longmans.

Farber, M. (2018). *Game-Based Learning in Action: How an Expert Affinity Group Teaches with*

Games. New York: Peter Lang.

Farber, M. (2014). *Gamify your Classroom: A Field Guide to Game-Based Learning*. New York:

Peter Lang.

Farber, M. & Schrier, E., (2017). *The limits and strengths of using digital games as*

"Empathy Machines". UNESCO. MGIEP. (2017-05).

Favis, E. (2015). "Opinion – Your Choices Don't Matter In Telltale Games". *Game*

Informer. Retrieved from:

<http://www.gameinformer.com/b/features/archive/2015/02/03/why-your-choices-dont-matter-in-telltale-games.aspx>

- Fengfeng, K. (2008). A case study of computer gaming for math: Engaged learning from gameplay? *Computers & Education*, 1609-1620.
- Ferdig, R. E., & Pytash, K. E. (2014, January). Using video games for literacy acquisition and studying literate practices. In K. Schrier (Ed.), *Learning, Education and Games* (pp. 55-71). ETC Press.
- Ferguson, C. J. (2015). Do angry birds make for angry children? A meta-analysis of video game influences on children's and adolescents' aggression, mental health, prosocial behavior, and academic performance. *Perspectives on psychological science*, 10(5), 646-666.
- Ferris, D. R. (1999). The case for grammar correction in L2 writing classes: A response to Truscott (1996). *Journal of Second Language Writing*, 8, 1-11.
- Fetterman, D. M. (1998). *Ethnography*. London: Sage
- Flanagan, M. & Nissenbaum, H. (2014). *Values at Play in Digital Games*. Cambridge: MIT.
- Fleming, L. (2013). Expanding Learning Opportunities with Transmedia Practices: Inanmiate Alice as an Exemplar. *The National Association of Media Literacy Education's Journal of Media Literacy Education*. 5(2), 370-377
- Freire, P. (1968). *Pedagogy of the Oppressed*. New York: Seabury Press.
- Freire, P., & Macedo, D. (1987). *Literacy: Reading the word and the world*. West Port: Bergin & Harvey.
- Garcia, O. (2009). *Bilingual education in the 21st century: A global perspective*. Oxford, UK:Wiley-Blackwell.
- Gardner, R. C. (1985). *Social Psychology and Second Language Learning*. London: Arnold.
- Gee, J.P. (2015). The New Literacy Studies. In K. Pahl & J. Rowsell. (Eds.), *The Routledge Handbook of Literacy Studies*. (pp. 2-16). New York: Routledge.

- Gee, J. P. (2013) *Good video games and good learning: Collected essays on video games, learning and literacy*. New York: Peter Lang.
- Gee, J.P. (2007). *What Video Games Have to Teach Us About Learning and Literacy*. New York: Routledge
- Gee, J. P. (2008). "Learning and Games". In K. Salen (Ed.). *The Ecology of Games: Connecting Youth, Games, and Learning*. MIT press. (21-40)
- Gee, J. P. (2008). Video games and embodiment. *Games and Culture*, 3(3-4), 253-263.
- Gee, J. P. (1990). *Social linguistics and literacies: Ideology in discourses*. London: Falmer Press.
- Gee, J.P., & Hayes, E. R. (2011). *Language and learning in the digital age*. New York: Routledge.
- Genette, G. (1997). *Paratexts: Thresholds of interpretation*. London: Cambridge University Press.
- Gerber, H. R., & Price, D. P. (2011). Twenty-first-century adolescents, writing, and new media: Meeting the challenge with game controllers and laptops. *English Journal*, 68-73.
- Gervais, B. (2008). The Myth of Presence. The Immediacy of Representation in Cyberspace. *Image [&] Narrative*, 23.
- Gervais, B., & Saemmer, A. (2011). Présentation: Esthétiques numériques. Textes, structures, figures. *Protée*, 39(1), 5-8.
- Giampapa, F. (2010). Multiliteracies, pedagogy and identities: Teacher and student voices from a Toronto elementary school. *Canadian journal of Education*, 33(2), 407-431.
- Giddings, L. R. (1988). Beyond ED Hirsch and Cultural Literacy: Thinking Skills for Cultural Awareness. *Community Review*, 8(2), 5-13.

- Gouthro, P., & Holloway, S. (2013). Preparing teachers to become lifelong learners: Exploring the use of fiction to develop multiliteracies and critical thinking. *Language and Literacy*, 15(3), 50.
- Graham, R. J. (1989). The Irish Readers Revisited: The Power of the Text (book). *Canadian Journal of Education/Revue canadienne de l'education*, 414-426.
- Green, B. (2002). "A literacy project of our own?". *English in Australia*, 25-32.
- Greenhow, C. (2009). Tapping the wealth of social networks for professional development. *Learning & Leading with Technology*, 36(8), 10-11.
- Hafner, C. A., Chik, A., & Jones, R. H. (2013). Engaging with digital literacies in TESOL. *TESOL Quarterly*, 47(4), 812-815.
- Halliday, M. A. K. (1978). *Language as Social Semiotic*. Arnold: London.
- Hammersley, M. (2006). Ethnography: problems and prospects. *Ethnography and education*, 1(1), 3-14.
- Hammersley, M. (2001). Some Questions about Evidence-based Practice in Education. Paper presented at the symposium on "Evidence-based practice in education" at the *Annual Conference of the British Educational Research Association*. University of Leeds, England. September 13-15, 2001
- Harman, G. (2005). *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things*. Chicago, Illinois: Open Court.
- Harmer, J. (2007). *The Practice of English Language Teaching*. New York: Pearson.
- Harushimana, I. (2008). Teaching Out-of-School Multiliteracy Opportunities: Tools for Fostering Literacy among Newcomer and Generation 1.5 Urban Learners. *Journal of Urban Learning, Teaching, and Research*, 4, 35-45.
- Hayles, N. K. (2012). *How we think: Digital media and contemporary technogenesis*. University

of Chicago Press.

Hayles, K. (2008). *Electronic Literature: New Horizons for the Literary*. Notre Dame, Indiana:

University of Notre Dame Press.

Hayles, N. (2007). Hyper and deep attention: The generational divide in cognitive modes.

Profession, 187-199.

Hayles, K. N. & Pressman, J. (2013). *Comparative textual media: Transforming the humanities in the postprint era*. Minneapolis: Univ. of Minnesota.

Heath, S. B., & Street, B. V. (2008). *On Ethnography: Approaches to Language and Literacy Research. Language & Literacy (NCRL)*. New York: Teachers College Press.

Heath, S. B. (1983). *Ways with words: Language, life and work in communities and classrooms*. Cambridge University Press.

Hembrooke, H., & Gay, G. (2003). The laptop and the lecture: The effects of multitasking in learning environments. *Journal of computing in higher education*, 15(1), 46-64.

Heckman, D. (2010). Loss of Grasp. *Electronic Literature Directory*.

<http://directory.eliterature.org/individual-work/650>

Herrington, J., McKenney, S., Reeves, T. and Oliver, R. (2007) *Design-based research and doctoral students: Guidelines for preparing a dissertation proposal*. In: World Conference on Educational Multimedia, Hypermedia and Telecommunications (EDMEDIA) 2007, 25 - 29 June 2007, Vancouver, Canada pp. 4089-4097.

Hinkel, E. (2001). Building awareness and practical skills to facilitate cross-cultural Communication. *Teaching English as a second or foreign language*, 3, 443-458.

- Hirsch, E. D. (1987). *Cultural literacy: What every American should know*. Boston, MA: Houghton Mifflin.
- Hitosugi, C. I., Schmidt, M., & Hayashi, K. (2014). Digital game-based learning (DGBL) in the L2 classroom: The impact of the UN's off-the-shelf videogame, Food Force, on learner affect and vocabulary retention. *CALICO Journal*, 31(1), 19.
- Hoadley, C. M. (2004). Methodological alignment in design-based research. *Educational psychologist*, 39(4), 203-212.
- Hofer, B. K. (2004). Epistemological understanding as a metacognitive process: Thinking aloud during online searching. *Educational Psychologist*, 39(1), 43-55.
- Honer, A. (2004). Life-World Analysis in Ethnography. In *A Companion to Qualitative Research*, (pp.113-122).
- Holmevik, J. R. (2012). *Inter/vention: Free play in the age of electracy*. MIT Press.
- Howe, K. R. (2012). Mixed methods, triangulation, and causal explanation. *Journal of Mixed Methods Research*, 6(2), 89-96.
- Howell, E. & Reinking, D. (2014). In R.S. Anderson. (Ed.). (2014). *Handbook of Research on Digital Tools for Writing Instruction in K-12 Settings*. IGI Global.
- Hubbard, P. (1991). Evaluating computer games for language learning. *Simulation & Gaming*, 22(2), 220-223.
- Huizinga, Johan (1937). *Homo Ludens*. New York: Routledge.
- Hulstijn, J. H. (2001). Intentional and incidental second-language vocabulary learning: A reappraisal of elaboration, rehearsal and automaticity. In P. Robinson (Ed.), *Cognition and Second Language Instruction*. Amsterdam: Cambridge University Press.
- Jacobs, G. E. (2013). Reimagining multiliteracies: A response to Leander and Boldt. *Journal of Adolescent & Adult Literacy*, 57(4), 270-273.

- Janks, H. (1993). *Language and power*. Johannesburg, South Africa: Hodder & Stoughton.
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. NYU press.
- Jewitt, C. (2005). Multimodality, “reading”, and “writing” for the 21st century. *Discourse: studies in the cultural politics of education*, 26(3), 315-331.
- Joseph, C. & Pullinger, K. (2005-2014). *Inanimate Alice*. Bradfield Publishing Group.
- Retrieved from <http://www.inanimatealice.com>
- Jota, A. (2007). *Lost Pig*. Self-published.
- Juul, Jesper (2001a). "Games Telling Stories? A Brief Note on Games and Narratives." *Game Studies*, 1(1). Retrieved from <http://gamestudies.org/0101/juul-gts/>
(<http://gamestudies.org>
- Kaiser Family Foundation. (2005). Generation M: Media in the Lives of 8-18 Year Olds.
- Retrieved from <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/generation-m-media-in-the-lives-of-8-18-year-olds-report.pdf>
- Kellner, D. (2000). New Technologies/New Literacies: Reconstructing Education for the New Millennium. *Teaching Education*, 11(3). 245-265.
- Kenny, R. F., & McDaniel, R. (2011). The role teachers' expectations and value assessments of video games play in their adopting and integrating them into their classrooms. *British Journal of Educational Technology*, 42(2), 197-213.
- Kepner, C. G. (1991). An experiment in the relationship of types of written feedback to the development of second-language writing skills. *Modern Language Journal*, 75, 305–313.
- Kern, R. (2000). *Literacy and language teaching*. Oxford University Press.
- Khatib, M. (2011). Literature in EFL/ESL classroom. *English Language Teaching*, 4(1),

201-208.

- King, J. (2002). Using DVD Films in the EFL classroom. *ELT Newsletter*. Article 88, February 2002. Retrieved from <http://www.eltnewsletter.com/back/February2002/art882002.htm>.
- Klimmt, C. (2009). Key dimensions of contemporary video game literacy: Towards a normative model of the competent digital gamer. *Eludamos. Journal for Computer Game Culture*, 3(1), 23-31.
- Kolb, D. A. (1975). Towards an applied theory of experiential learning. *Theory of Group Processes*, 33-58.
- Koltay, T. (2011). The media and the literacies: Media literacy, information literacy, digital literacy. *Media, Culture & Society*, 33(2), 211-221.
- Korthagen, F., & Vasalos, A. (2005). Levels in reflection: Core reflection as a means to enhance professional growth. *Teachers and teaching*, 11(1), 47-71.
- Krajcik, J. S., & Blumenfeld, P. C. (2006). *Project-based learning* (pp. 317-34). na.
- Krashen, S. (1994). The input hypothesis and its rivals. In: Ellis, N.C. (Ed.) *Implicit and explicit learning of languages*, (pp. 45-77). Academic Press.
- Kress, G. (2010). *Multimodality: A social semiotic approach to contemporary communication*. London: Routledge.
- Kress, G. (2003). *Literacy in the new media age*. London, Routledge Falmer.
- Kress, G. (2000). Multimodality: Challenges to thinking about language. *Tesol Quarterly*, 34(2), 337-340.
- Kress, G.R. & Van Leeuwen, T. (2002). *Multimodal Discourse: the modes and media of contemporary communication*. London: Edward Arnold.
- Kubota R. & Lin, A. (Eds.) (2009). *Race, Culture and Identity in Second Language*

Education. London: Routledge.

- Kuby, C. R., & Rowsell, J. (2017). Early literacy and the posthuman: Pedagogies and methodologies. *Journal of Early Childhood Literacy*, 17(3), 285-296.
- Kucan, L., & Beck, I.L. (1997). Think aloud and reading comprehension research: Inquiry, instruction, and social interaction. *Review of Educational Research*, 67, 271–299.
- Kyei-Blankson, L. & Traore, M. (2011). Using Literature and Multiple Technologies in ESL Instruction. *Journal of Language Teaching and Research*, 2(3), 561-568.
- Lacelle, N. (2012). Déconstruire et reconstruire des œuvres multimodales : une expérience vécue en classe à partir des bandes-dessinées Paul et Persepolis. In Lebrun, M., N. Lacelle et J.-F. Boutin (Eds.), *La littératie médiatique multimodale. De nouvelles approches en lecture-écriture à l'école et hors de l'école, de l'école*. (pp. 125-140). Québec : PUQ.
- Lacelle, N. (2011). Approche croisée de l'enseignement-apprentissage du roman et du film: le cinéma comme outil pédagogique en français langue seconde et étrangère. *Revue de l'AQEFSL*, 45-60.
- Lacelle, N., Beaudry, M.-C., Brehm, S. & Lebrun, M. (2017). Compétences, processus et stratégies de lecture en fonction des genres textuels numériques et des supports numériques. Programme de recherche sur l'écriture et la lecture (PREL). Retrieved from <http://www.frqsc.gouv.qc.ca/partenariat/nos-resultats-de-recherche/histoire/competences-processus-et-strategies-de-lecture-en-fonction-des-genres-textuels-numeriques-et-des-supports-numeriques-px7fpozfl504807009871>
- Lacelle, N., Lebrun, M. Boutin, J.-F., Richard, M. & Martel, V. (2015). Les compétences en littératie médiatique multimodale au primaire et au secondaire : une grille d'analyse transdisciplinaire. In Lafontaine, L. & Pharand, J. (Ed.), *Littératie: vers une maîtrise des*

compétences dans divers environnements. Montréal, Canada: Presses de l'Université du Québec.

Lacroix, F. (2007). La popularité du cégep anglais se confirme aussi à l'extérieur de Montréal. *Le Devoir*. Retrieved from <https://www.ledevoir.com/opinion/idees/500507/des-idees-en-revues-la-popularite-du-cegep-anglais-se-confirme-aussi-a-l-exterieur-de-montreal>

Lalonde, M., & Castro, J. C. (2015). Amplifying Youth Cultural Practices by Engaging and Developing Professional Identity Through Social Media. In J. Black (Ed.), *Youth Practices in Digital Arts and New Media* (pp. 40–62). New York, NY: Palgrave Macmillan.

Lankshear, C. (1993). *Critical literacy: Politics, praxis, and the postmodern*. New York: SUNY Press.

Lankshear, C., & Knobel, M. (2008). *Digital literacies: Concepts, policies and practices* (Vol. 30). Peter Lang.

Lankshear, C., & Knobel, M. (2003). *New Literacies: Changing Knowledge and Classroom Learning*. Buckingham, UK: Open University Press.

Lantolf, J. P. & Thorne, SL (2006). *Sociocultural theory and the genesis of second language development*. Oxford, UK: Oxford University Press.

Larsen-Freeman, D., & Anderson, M. (2011). *Techniques and Principles in Language Teaching*. Oxford, UK: Oxford University Press.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Leander, K., & Boldt, G. (2013). Rereading “A pedagogy of multiliteracies” bodies, texts, and emergence. *Journal of Literacy Research*, 45(1), 22-46.

- Lebrun, M & Lacelle, N. (2012a). Les usages linguistiques des adolescents québécois sur les médias sociaux, *ALSIC*. Retried from: <http://alsic.revues.org/2462>
- Lebrun, M, & Lacelle, N. (2012b) . Évaluer les compétences des élèves en littératie médiatique multimodale, *Québec français*, numéro thématique ‘La littératie médiatique’, 166,(summer), (48-49). Retrieved from:
<http://www.erudit.org/culture/qf1076656/qf0266/67268ac.html?vue=resume&mode=restriction>
- Lebrun, M., Lacelle, N. & Boutin, J.-F. (Eds.), (2012). *La littératie médiatique multimodale. De nouvelles approches en lecture-écriture à l'école et hors de l'école*. Québec: Presses de l'Université du Québec.
- Lebrun, M., Lacelle, N. & Boutin, J.-F. (Eds.) (2017). *La littératie médiatique multimodale appliquée en contexte numérique..* Québec: Presses de l'Université du Québec.
- Lemke, J. (2000). Across the Scales of Time: Artefacts, Activities, and Meanings in Ecosocial Systems. *Mind, Culture, and Activity*, 7(4), 273-290.
- Lenhart, A. (2012). *Teens, Smartphones and Texting*. Pew Research Center, Washington, D.C.
Retrieved from <http://www.pewinternet.org/2012/03/19/teens-smartphones-texting/>
- Leu, D. J., Kinzer, C. K., Coiro, J., Cammack, D. (2013). New Literacies: A Dual-Level Theory of the Changing Nature of Literacy, Instruction, and Assessment. In D.E. Alvermann, N. J. Unrau & R. B. Ruddell. (Eds.) *From theoretical models and process of reading*, (6th ed.) (pp. 1150-1181) Newark, USA: International Reading Association.
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford University Press.
- Lewis, G., Jones, B., & Baker, C. (2012). Translanguaging: Origins and development from school to street and beyond. *Educational Research and Evaluation*, 18(7), 641-654.

- Liu, E. (2015). "What Every American Should Know: Defining Common Cultural Literacy for an Increasingly Diverse Nation". *The Atlantic*. Retrieved from:
<https://www.theatlantic.com/politics/archive/2015/07/what-every-american-should-know/397334/>
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American psychologist*, 57(9), 705.
- Lopera Medina, S. (2014). Motivation Conditions in a Foreign Language Reading Comprehension Course Offering Both a Web-Based Modality and a Face-to-Face Modality. *PROFILE: Issues in Teachers' Professional Development*, 16(1), 89-104.
- Lotherington, H., & Jenson, J. (2011). Teaching multimodal and digital literacy in L2 settings: New literacies, new basics, new pedagogies. *Annual review of applied linguistics*, 31, 226-246.
- Luke, A., & Dooley, K. T. (2011). Critical literacy and second language learning. In. E. Hinkel. (Ed.) *Handbook of research on second language teaching and learning*. New York: Routledge.
- MacIntyre, P. D. (2002). Motivation, anxiety and emotion in second language acquisition. *Individual differences and instructed language learning*, 2, 45-68.
- Mackey, M. (2003). Television and the teenage literate: Discourses of 'Felicity'. *College English* 65(4), 389-410.
- Markham, P., Peter, L. A., & McCarthy, T. J. (2001). The effects of native language vs. target language captions on foreign language students' DVD video comprehension. *Foreign language annals*, 34(5), 439-445.
- Marshall, E., & Toohey, K. (2011). Representing family: Community funds of knowledge, bilingualism, and multimodality. *Harvard Educational Review*, 80(2), 221-242.

- Maxwell, J. (1992). Understanding and validity in qualitative research. *Harvard Educational Review*, 62(3), 279-301.
- Mäyrä, F., Lammes, S., Deterding, S., Giddings, S., Consalvo, M., Mortensen, T. E., Raessens, J. and Jørgensen, K. (2015) 'From Game Studies to Studies of Play in Society: A Panel', in. *DiGRA 2015: Diversity of play: Games – Cultures – Identities*, Lüneburg: 2015.
- McCloud, S. (1994). *Understanding Comics*. New York: William Morrow Paperbacks
- McKeown, R. G., & Gentilucci, J. L. (2007). Think-aloud strategy: Metacognitive development and monitoring comprehension in the middle school second-language classroom. *Journal of Adolescent & Adult Literacy*, 51(2), 136-147.
- McKenney, S. E. & Reeves, T. C. (2012). *Conducting educational design research*. Londres : Routledge.
- McLuhan, M. (2001). *The Medium is the Massage*. Gingko Press: Berkeley, CA. (Original work published 1967).
- McLuhan, M. (1964). *Understanding Media: The Extensions of Man*. Toronto: McGraw Hill.
- Mediasmarts. (n.d.). Media Literacy Fundamentals. *Mediasmarts: Canada's Centre for Digital and Media Literacy*. Retrieved from <http://mediasmarts.ca/digital-media-literacy/general-information/digital-media-literacy-fundamentals/media-literacy-fundamentals>
- Méloche-Holubowski, M. (2016, August 26). "Pourquoi choisir d'étudier en anglais?". Radio-Canada. Retrieved from <http://ici.radio-canada.ca/nouvelle/798827/francophones-ecole-cegep-universite-anglophone-langue-maternelle>
- Meyer, F., Barré, V., Lefebvre, N. & Gandon, C. (2019) Développer des compétences pour

- enseigner en classe inversée dans un contexte de visioconférence: un projet de recherche orientée par la conception. In T. Karsenti (dir.). *Le numérique en éducation*. PUQ/Miller, M., & Hegelheimer, V. (2006). The SIMs meet ESL Incorporating authentic computer simulation games into the language classroom. *Interactive Technology and Smart Education*, 3(4), 311-328.
- Mills, D., & Morton, M. (2013). *Ethnography in Education*. London: Sage.
- Mills, K. A. (2010). A review of the “digital turn” in the new literacy studies. *Review of Educational Research*, 80(2), 246-271.
- Ministère de l'Éducation et enseignement supérieur (MEES). (2017). *Politique de la réussite éducative*. Retrieved 12 April 2019 from: <https://securise.education.gouv.qc.ca/politique-de-la-reussite-educative/>
- Ministère d'Éducation, des Loisirs et des Sports (MELS). (2009). *Formation générale: commune, propre et complémentaire aux programmes d'études conduisant au diplôme d'études collégiales*. Québec, Canada.
- Ministère de l'Éducation, des Loisirs et du Sport du Québec (MELS). (2005). *The education reform: The changes under way*. Retrieved 19 January 2018 from: www.mels.gouv.qc.ca/lancement/Renouveau_ped/452771.pdf
- Moje, E. B., & Lewis, C. (2007). Examining opportunities to learn literacy: The role of critical sociocultural literacy research. *Reframing sociocultural research on literacy: Identity, agency, and power*, 15-48.
- Molleindustria. (2006). *The McDonalds Videogame*. Self-published.
- Montembeault, H., & Perron, B. (2018). La Focalis-action: Des savoirs narratifs aux faïences vidéoludiques. *Sciences du jeu*, (9).
- Moran, P. (2018). Mise en scène du choix et narrativité expérientielle dans les jeux vidéo et les

livres dont vous êtes le héros. *Sciences du jeu*, (9).

Moreno, R., & Mayer, R. (2007). Interactive multimodal learning environments.

Educational Psychological Review, 19, 309-326.

Morris, L. (1998). Differences in men's and women's ESL writing at the junior college level:

Consequences for research on feedback. *Canadian modern language review*, 55(2), 219-238.

Murray, J. H. (1998). *Hamlet on the holodeck: The future of narrative in cyberspace*.

New York: Simon and Schuster.

Muthusamy, C. (2010). Literature learning in the Malaysian ESL classroom: A UiTM

experience. *Language Teaching and Research*, 1(1), 69-76.

NAMLE. (n.d.) Media Literacy Defined. *National Association of Media Literacy*

Education. Retrieved from <http://namle.net/publications/media-literacy-definitions/>

Neville, D. O. (2014). The story in the mind: the effect of 3D gameplay on the structuring of

written L2 narratives. *ReCALL*, 27(1): 1-17.

Neville, D.O. (2010). Structuring Narrative in 3D Digital Game-based Learning Environments to

Support Second Language Acquisition. *Foreign Language Annals*, 43(3), 446-449.

Neville, D.O., Shelton, B. & McInnis, B. (2009). Cybertext redux: using digital game-based ,

reading and culture. *Computer Assisted Language Learning*. 22(5). 409-424.

The New London Group. (1996). A Pedagogy of Multiliteracies: Designing social futures.

Harvard educational review, 66(1), 60-93.

Nintendo. (1985). *Super Mario Brothers*. Nintendo.

Noels, K.A., Pelletier, L.G., Clément, R. and Vallerand, R.J. (2000) Why are you

learning a second language? Motivational orientations and self-determination theory.

Language Learning 50, 57_85.

- Norton, B. (2013). *Identity and language learning: Extending the conversation*. Multilingual matters. Toronto.
- Office of Communications. (2014). The Communications Market 2014 (August) Report. Retrieved from <http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr14/uk/>
- Ohler, J. (2008). *Digital Storytelling in the Classroom. New Media Pathways to Literacy, Learning, and Creativity*. Thousand Oaks: Corwin Press.
- Olson, D. (1977). From utterance to text: The bias of language in speech and writing. *Harvard educational review*, 47(3), 257-281.
- Ouellette, G., & Michaud, M. (2016). Generation text: Relations among undergraduates' use of text messaging, textese, and language and literacy skills. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 48(3), 217.
- Pahl, K. (2004). Narratives, artifacts and cultural identities: An ethnographic study of communicative practices in homes. *Linguistics and Education*, 15(4), 339-358.
- Paillé, P., & Mucchielli, A. (2012). *L'analyse qualitative en sciences humaines et sociales*. Paris: Armand Colin.
- Palys, T. (2008). Purposive sampling. In L. M. Given (Ed.) *The Sage Encyclopedia of Qualitative Research Methods*. (pp. 697-8). Los Angeles: Sage.
- Pantaleo, S. (2010). Developing narrative competence through reading and writing metafictional texts. *Literacy Research and Instruction*, 49(3), 264-281.
- Pedagogy. (n.d.) In *Oxford english dictionary*. Retrieved from <https://en.oxforddictionaries.com/definition/pedagogy>
- Peirce, B. N. (1995). Social identity, investment, and language learning. *TESOL quarterly*, 29(1), 9-31.

- Pensky, M. (2001). *Digital Game Based Learning*. Berkshire, U.K.: McGraw Hill.
- Peppler, K., Warschauer, M., & Diazgranados, A. (2010). Game critics: Exploring the role of critique in game-design literacies. *E-learning and Digital Media*, 7(1), 35-48.
- Peterson, M. (2013). *Computer Games and Language Learning*. New York: Palgrave MacMillan.
- Phillips, M. (1987). Potential paradigms and possible problems for CALL. *System*, 15(3), 275-287.
- Phillipson, R. (1992). *Linguistic imperialism*. Oxford: Oxford University Press.
- Piaget, J. (1951). *Play, dreams and imitation in childhood*. New York: Norton.
- Piirainen-Marsh, A. P., & Tainio, L. (2009). Other-Repetition as a Resource for Participation in the Activity of Playing a Video Game. *The Modern Language Journal*, 93(2), 153-169.
- Pink, S., Horst, H., Postill, J., Hjorth, L., Lewis, T, Tacchi, J. (2015). *Digital Ethnography Principles and Practice*. London: Sage.
- Pleau, J. (2017). La texte à l'ère du numérique: Analyse du concept de genre numérique. *Revue canadienne des jeunes chercheurs en éducation*, 8(1), 144-149.
- Ponce, R. (2014). *Surviving History: The Fever*. Self-published.
- Pullinger, K. (2008). Digital Fiction: From the Page to the Screen. In Adams, R., Gibson, S. and Müller Arisona, S. (Eds.), *Transdisciplinary Digital Art, Sound, Vision and the New Screen*, Berlin/Heidelberg : Springer/Verlag, 120-126.
- Qian, M., & Clark, K. R. (2016). Game-based Learning and 21st century skills: A review of recent research. *Computers in Human Behavior*, 63, 50-58.
- Quinlisk, C. C. (2003). Media literacy in the ESL/EFL classroom: Reading images and cultural stories. *Tesol Journal*, 12(3), 35-39.
- Rama, P. S., Black, R. W., van Es, E., & Warschauer, M. (2012). Affordances for second

- language learning in World of Warcraft. *ReCALL*, 24(03), 322-338.
- Ranalli, J. (2008). Learning English with The Sims: exploiting authentic computer simulation games for L2 learning. *Computer Assisted Language Learning*, 21(5), 441-455.
- Rankin, J. M. (1988). Designing thinking aloud strategies in ESL reading. *Reading in a Foreign Language*, 4 (2), 119-132.
- Reeves, T. C. (2006). Design research from a technology perspective. *Educational design research*, 1(3), 52-66.
- Reinders, H. (Ed.). (2012). *Digital Games in Language Learning and Teaching*. New York: Palgrave MacMillan.
- Reinhardt, J. (2013). Digital game-mediated foreign language teaching and learning: Myths, realities and opportunities. In M. Derivry-Plard, P. Faure, & C. Brudermann (Eds.), *Apprendre les langues à l'université au 21ème siècle*, 161-178. Paris, France: Riveneuve.
- Richards, J. C. (2005). *Communicative language teaching today*. Singapore: SEAMEO Regional Language Centre.
- Richards, K. (2003). *Qualitative Inquiry in TESOL*. New York: Palgrave Macmillan.
- Rideout, V., & Robb, M. B. (2018). Social media, social life: Teens reveal their experiences. San Francisco, CA: Common Sense Media.
- Rio, F. (2014). Le livre augmenté : pour une innovation technique et narrative. *Mémoires du livre / Studies in Book Culture*, 5 (2)
- Robin, B.R. (2008). Digital Storytelling: A Powerful Technology Tool for the 21st Century Classroom. *Theory Into Practice*, 4 (3), 220-228
- Rokni, A., & Ataee, A. (2014). Movies in EFL classrooms: With or without subtitles. *The Journal*, 3(1), 715-726.
- Roussos, G., & Dovidio, J. F. (2016). Playing below the poverty line: Investigating an

online game as a way to reduce prejudice toward the poor. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 10(2), 1-24.

Roussos, G. (2015, December 7). When good intentions go awry: The counterintuitive effects of a prosocial online game. Retrieved from: <https://www.psychologytoday.com/blog/sound-science-sound-policy/201512/when-good-intentions-go-awry>.

Rowse, J. (2013). *Working with multimodality: Rethinking literacy in a digital age*. New York: Routledge.

Rowse, J., & Decoste, E. (2012). (Re) designing writing in English class: a multimodal approach to teaching writing. *Pedagogies: An International Journal*, 7(3), 246-260.

Rowse, J., McLean, C., & Hamilton, M. (2012). Visual literacy as a classroom approach. *Journal of Adolescent & Adult Literacy*, 55(5), 444-447.

Rowse, J., & Pahl, K. (2015). Introduction. In K. Pahl & J. Rowse. (Eds.), *The Routledge Handbook of Literacy Studies*. (pp. 2-16). New York: Routledge

Russell, J., & Spada, N. (2006). The effectiveness of corrective feedback for the acquisition of L2 grammar. *Synthesizing research on language learning and teaching*, 133-164.

Ryu, D. (2011). Non-native English speakers' multiliteracy learning in beyond-game culture: A sociocultural study. *Journal of online learning and teaching*, 7(2), 231.

Salen, K., & Zimmerman, E. (2004). *Rules of play: Game design fundamentals*. Cambridge: MIT Press.

Salter, A. (2014). *What is Your Quest?: From Adventure Games to Interactive Books*. University of Iowa Press.

Sampat, E. (2017). *Empathy engines: Design games that are personal, political, and profound*. Seattle, WA: CreateSpace.

- Sana, F., Weston, T., & Cepeda, N. J. (2013). Laptop multitasking hinders classroom learning for both users and nearby peers. *Computers & Education*, 62, 24-31.
- Sanchez, É. & Monod-Ansaldi, R. (2015). Recherche collaborative orientée par la conception. *Éducation et didactique*, 9(2), 73-94. Retrieved from <http://educationdidactique.revues.org/2288>
- Sandoval, W. A., & Bell, P. (2004). Design-based research methods for studying learning in context: Introduction. *Educational Psychologist*, 39(4), 199-201.
- Sanford, K., & Madill, L. (2007). Understanding the power of new literacies through video game play and design. *Canadian Journal of Education/Revue canadienne de l'éducation*, 432-455.
- Savignon, S. J. (1997). *Communicative competence: Theory and classroom practice: Texts and contexts in second language learning*. McGraw-Hill Humanities Social.
- Seror, J. (2013). Screen capture technology: A digital window into students' writing processes/Technologie de capture d'écran: une fenêtre numérique sur le processus d'écriture des étudiants. *Canadian Journal of Learning and Technology/La revue canadienne de l'apprentissage et de la technologie*, 39(3).
- Scholes, R. E. (1985). *Textual power: Literary theory and the teaching of English*. Yale University Press.
- Schön, D. A. (1983). *The Reflective Practitioner*. London: Temple Smith.
- Schrier, K. (2014). *Learning, Education and Games. Volume One: Curricular and Design*. Carnegie Mellon University: ETC Press.
- Scollon, R., & Scollon, S. B. (1981). *Narrative, literacy and face in interethnic communication*. Norwood, NJ: Ablex Pub.

- Shor, I. (1999). What is critical literacy. *Journal for Pedagogy, Pluralism & Practice*, 4(1), 1-26.
- Short, E. (2000). *Galatea*. Self-published.
- Sicart, M.A. (2014). *Play Matters*. Cambridge: MIT Press.
- Sicart, M. A. (2011). Against procedurality. *Game studies*, 11(3).
- Simanowski, R., Schäfer, J. & Gendolla, P. (2010). Reading moving letters: *Digital literature in research and teaching: A handbook*. Bielefeld, Germany: Transcript Verlag.
- Simard, D., Falardeau, É., Émery-Bruneau, J., Côté, H. (2007). En amont d'une approche culturelle de l'enseignement: le rapport à la culture. *Revue des sciences de l'éducation*, 33(2), 287-304.
- Simpkins, J. (2017). "In the Best Video Game Stories, Our Choices Don't Matter". *Kotaku*. Retrieved from <http://www.kotaku.co.uk/2017/04/11/in-the-best-video-game-stories-our-choices-dont-matter>
- Sinclair, G. (2010, May). *Exploring Canada's digital future*. Featured "Big Thinking" lecture at the Congress of the Humanities and Social Sciences, Concordia University, Montréal, Québec, Canada.
- Sipe, L., & Pantaleo, S. (2008). (Eds.). *Postmodern picturebooks: Play, parody, and self-referentiality*. New York, Routledge.
- Skinner, B. F. (1978). *Reflections on Behaviorism and Society*. New Jersey: Prentice Hall.
- Smethurst, T., & Craps, S. (2015). "Playing with trauma: interreactivity, empathy, and complicity in the walking dead video game". *Games and Culture*, 10(3), 269-290.
- Snow, K. (2015). *Beneath Flores*. Self-published.
- Snyder, I. & Bulfin, S. (2008) Using New Media in the Secondary English Classroom. In J.

- Coiro, M. Knobel, C. Lankshear, D. Leu (Eds.). In *Handbook of Research on New Literacies*, 805-837. New York: Routledge.
- Soliman, N.A. (2012). Integrating Literature and Technology in EFL/ESL Contexts. *TESOL Arabia Perspectives*. 19 (2). 27-30.
- Spack, R. (1985). Literature, reading, writing, and ESL: Bridging the gaps. *Tesol Quarterly*, 19(4), 703-725.
- Spurlock, M. (2004). *Supersize Me*. USA: Samuel Goldwyn Films.
- Squire, K. D. (2008). Video game-based learning: An emerging paradigm for instruction. *Performance Improvement Quarterly*, 21(2), 7.
- Squire, K. D. (2008). Video-Game Literacy--A Literacy of Expertise. In J. Coiro, M. Knobel, C. Lankshear, D. Leu (Eds.). In *Handbook of Research on New Literacies*, 635-670. New York: Routledge.
- Staaby, T. (2015). "Zombie-Based Critical Learning – Teaching Moral Philosophy with the Walking Dead". *Well played*, 76.
- Stake, R. E. (1995). *The Art of Case Study Research*. London: Sage.
- Statistics Canada (2018). A Portrait of Canadian Youth. Ottawa: Statistics Canada.
- Steinkuehler, C. (2007). Massively multiplayer online gaming as a constellation of literacy practices. *ELearning*, 4(3), 297–318.
- Steinkhueler, C. (2011). Video games and digital literacies. *Journal of adolescent & adult literacy*, 54(1), 61-63.
- Steinkuehler, C., Squire, K., & Barab, S. (Eds.). (2012). *Games, learning, and society: Learning and meaning in the digital age*. Cambridge University Press.
- Stenros, J. (2015) *Playfulness, Play, and Games - A Constructionist Ludology Approach*. Tampere University.

- Stevens, L. P. (2001). "South Park" and Society: Instructional and Curricular Implications of Popular Culture in the Classroom. *Journal of Adolescent & Adult Literacy*, 44(6), 548-555.
- Storksdieck, M. (2016). Critical information literacy as core skill for lifelong STEM learning in the 21st century: reflections on the desirability and feasibility for widespread science media education. *Cultural studies of science education*, 11(1), 167-182.
- Straeubig, M. (2016b, August). Playing with distinctions. Towards a Theory of Playful Systems. Presented at the *DiGRA FDG 2016 Conference / Doctoral Consortium, Dundee*.
<https://doi.org/10.13140/RG.2.1.4057.4322>
- Street, B. V. (1984). *Literacy in theory and practice* (Vol. 9). Cambridge University Press.
- Street, B. V. (1984). *Literacy in theory and practice* (Vol. 9). Cambridge University Press.
- Suh, S., Kim, S. W., & Kim, N. J. (2010). Effectiveness of MMORPG-based instruction in elementary English education in Korea. *Journal of Computer Assisted Learning*, 26(5), 370-378.
- Sundqvist, P., & Sylvén, L. K. (2014). Language-related computer use: Focus on young L2 English learners in Sweden. *ReCALL*, 26(1), 3-20.
- Swain, M., Kinnear, P., & Steinman, L. (2011). *Sociocultural theory in second language education: An introduction through narratives* (Vol. 7). Toronto: Multilingual Matters.
- Sykes, J. E., Reinhardt, J., (2013). *Language at play: Digital games in second and foreign language teaching and learning*. Pearson Higher Ed.
- Sylvén, L. K., & Sundqvist, P. (2012). Gaming as extramural English L2 learning and L2 proficiency among young learners. *ReCALL*, 24(03), 302-321.
- Takeuchi, L. M., & Vaala, S. (2014). Level up Learning: A National Survey on Teaching with

- Digital Games. In *Joan Ganz Cooney Center at Sesame Workshop*. Joan Ganz Cooney Center at Sesame Workshop. 1900 Broadway, New York, NY 10023.
- Tan, C. T., Leong, T. W., & Shen, S. (2014, April). Combining think-aloud and physiological data to understand video game experiences. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 381-390). ACM.
- Tan, J. P. L., & McWilliam, E. (2009). From literacy to multiliteracies: Diverse learners and pedagogical practice. *Pedagogies: An International Journal*, 4(3), 213-225.
- Tanenbaum, K. & Tanenbaum, J. (2009) "Commitment to Meaning: A Reframing of Agency in Games". *Digital Arts and Culture 2009*. Irvine: UC Irvine .
- Taraborelli, D. (2008). Soft peer review: Social software and distributed scientific evaluation. Proceedings of the 8th International Conference on the Design of Cooperative Systems (COOP 08), CarryLeRouet, France, May 20–23, 2008. Retrieved February 7, 2019, from http://nitens.org/docs/spr_coop08.pdf
- Technology. (n.d.) In *Oxford english dictionary*. Retrieved from <https://en.oxforddictionaries.com/definition/technology>
- Thomas, G. (2010). *How to do your case study: A guide for students and researchers*. London: Sage.
- Thorne, S. L. (2008). Mediating technologies and second language learning. In J. Coiro, M. Knobel, C. Lankshear, D. Leu (Eds.). In *Handbook of Research on New Literacies*, 417-449. New York: Routledge 417-449.
- Thorne, S. L., Black, R. W., & Sykes, J. M. (2009). Second language use, socialization, and learning in Internet interest communities and online gaming. *The Modern Language Journal*, 93(s1), 802-821.

- Thorne, S. L., & Reinhardt, J. (2008). Bridging activities, new media literacies, and advanced foreign language proficiency. *Calico Journal*, 25(3), 558-572.
- Toohy, K., Dagenais, D., Fodor, A., Hof, L., Nuñez, O., Singh, A., & Schulze, L. (2015). “That sounds so coool”: Entanglements of children, digital tools, and literacy practices. *TESOL Quarterly*, 49(3), 461-485.
- Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, 46, 327–369.
- Turkle, S. (2011). *Alone Together: Why We Expect More from Technology and Less from Each Other*. New York: Basic Books.
- Tuyay, S., Jennings, L., & Dixon, C. (1995). Classroom discourse and opportunities to learn: An ethnographic study of knowledge construction in a bilingual third-grade classroom. *Discourse Processes*, 19(1), 75-110
- Ulmer, G. L. (2003). *Internet Invention: From Literacy to Electracy*. New York: Longman.
- Ulmer, G.L. (n.d.). “Electracy and Pedagogy”. Retrieved from:
<http://users.clas.ufl.edu/glue/longman/pedagogy/electracy.html>
- Unsworth, L. (2006) Towards a metalanguage for multiliteracies education: Describing the meaning making resources of language-image interaction, *English Teaching: Practice and Critique*, 5(1), p.55-76.
- Vahdat, S., & Behbahani, A. R. (2013). The effect of video games on Iranian EFL learners’ vocabulary learning. *Reading*, 13(1).
- Van, T. (2009). The Relevance of Literary Analysis to Teaching Literature in the EFL Classroom. *English Teaching Forum*, 3. 2-9.
- Vandendorpe, C. (2008). *Le livre et la lecture dans l'univers numérique*. Montréal: Presses de l'Université de Montréal, 191-209.

- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard university press.
- Walsh, M. (2008). Worlds have collided and modes have merged: Classroom evidence of changed literacy practices. *Literacy*, 42(2), 101-108.
- Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational technology research and development*, 53(4), 5-23.
- Ward, L., & Traweek, D. (1993). Application of a metacognitive strategy to assessment, intervention, and consultation: A think-aloud technique. *Journal of School Psychology*, 31, 469-485.
- Whatley, H. D. (2012). The effective use of motion pictures in the ESL Classroom. *Researchers World*, 3(3), 50.
- Williams, C. (1994). Arfarniad o ddulliau dysgu ac addysgu yng nghyd-destun addysg uwchradd ddwyieithog [An evaluation of teaching and learning methods in the context of bilingual secondary education] (Unpublished PhD thesis). University of Wales, Bangor, UK.
- Willinsky, J. (1992). Of literacy and the curriculum in Canada. *Journal of curriculum studies*, 24(3), 273-279.
- Willinsky, J. (1991). Postmodern literacy: A primer. *Interchange*, 22(4), 56-76.
- Willis Allen, H., & Paesani, K. (2010). Exploring the feasibility of a pedagogy of multiliteracies in introductory foreign language courses. *L2 Journal*, 2(1).
- Wittgenstein, L. (1959). *Philosophical Investigations*. New York: Harper.
- Wood, D., Bruner, J.S. & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17, 89-100.

- Yang, C. T.Y. (2012). Building virtual cities, inspiring intelligent citizens: Digital games for developing students' problem solving and learning motivation. *Computers & Education*, 59(2), 365-377.
- Yang, C. T. Y., & Chen, H. H. J. (2012). Learners' Perceptions of a Commercial Adventure Video Game for Learning English as a Second/Foreign Language. In *Proceedings of the 20th International Conference on Computers in Education ICCE*.
- Yayli, D. (2010). A think-aloud study: Cognitive and metacognitive reading strategies of ELT department students. *Egitim Arastirmalari-Eurasian Journal of Educational Research*, 38, 234-251.
- Yin, R. K. (2009). *Case study research: Design and Methods*. London: Sage.
- Yunus, M. M., Nordin, N., Salehi, H., Sun, C. H., & Embi, M. A. (2013). Pros and cons of using ICT in teaching ESL reading and writing. *International Education Studies*, 6(7), 119.
- Yutdhana, S. (2005). Design-based research in CALL. In J.L. Egbert & G.M. Petrie. (Eds.), *CALL research perspectives*, (pp. 169-178). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Zammit, K., & Downes, T. (2002). New learning environments and the multiliterate individual: A framework for educators. *Australian Journal of Language and Literacy*, The, 25(2), 24.
- Zheng, D. Young, M.F., Wagner, M., & Brewer, R.A. (2009). Negotiation for Action: English Language Learning in Game-Based Virtual Worlds. *The Modern Language Journal*, 93(4).

APPENDIX A

Survey 1

How do you self-identify?

Francophone (French is my first language, English is a language I learned later)

Anglophone (English is my first language, French is a language I learned later)

How often do you play digital games?

Never

Once every six months

Once every month

Once a week

More than once a week

Before this course, had you ever heard of digital literature?

Yes

No

Not sure

Please indicate your level of interest in digital games for this course:

Very interested

Somewhat interested

Neutral

Not very interested

Not at all interested

Survey 2

Please complete the following phrases:

The most difficult aspect about the digital literature we played was...

The most interesting aspect about the digital literature we played was...

The most interesting aspect about the digital game I chose was...

The most difficult aspect about the digital game I played was...

By learning about digital literature and digital games, I realized that....

Please feel free to add any comments or feedback in order to help improve the teaching of this material.

APPENDIX B

CHAMPLAIN REGIONAL COLLEGE

Lennoxville Campus

Course Outline

DEPARTMENT:	English
COURSE:	Literary Themes: The Self via Technology
COURSE CODE:	603-103-MQ
PREREQUISITE:	603-BE?-LE
COMPETENCY:	4EA2
WEIGHTING:	2-2-3
CONTACT HOURS:	60 (2 1/3 credits)
SEMESTER:	Fall 2016

Instructor: Nolan Bazinet **Office:** C311 **Phone:** 819-564-3666 X 188

1. Course Description

This course provides an analysis of literary texts that question and problematize technology, particularly through the ways in which humans are identified by it, and develop a sense of their self through it. Selected short stories, essays, works of digital literature, film and digital games will be analyzed in this course which will allow students to reflect on technology's role in meaning making and how it extends conceptions of human identity.

The objective of this course is to enable students to apply a critical approach to a literary theme. To this end, students should learn to recognize a work's literary theme, cultural context, and value system.

By the conclusion of the course, students will, with the aid of reference material and without artificial time constraints, be able to produce a 1000-word analysis. This analysis should recognize the elements within the text that define and reinforce a theme and its development. The students should use appropriate terminology and should thoroughly revise both the form and content of their work.

This third or fourth compulsory English course follows 603-BE?-LE.

2. Course Context

This is third or fourth compulsory English course follows 603-BE?-LE.

3. Statement of the Competency

4EA2: Apply an analytical approach to a literary theme. (C)

Elements of the Competency	Performance Criteria
1. Recognize the treatment of a theme within a literary text.	<ul style="list-style-type: none"> • Clear recognition of elements within the text, which define and reinforce a theme and its development. • Adequate demonstration of the effects of significant literary and rhetorical devices.
2. Situate a literary text within its cultural context.	<ul style="list-style-type: none"> • Appropriate recognition of a text as an expression of cultural context. • Adequate demonstration of the effects of significant literary and rhetorical devices.
3. Detect the value system inherent in a literary text.	<ul style="list-style-type: none"> • Appropriate identification of expression (explicit / implicit) of a value system in a text.
4. Write an analysis on a literary theme	<ul style="list-style-type: none"> • Selective use of terminology. • Effective presentation of a 1000-word coherent response to a text.
5. Revise the work.	<ul style="list-style-type: none"> • Appropriate use of revision strategies. • Appropriate revision of form and content

4. Course Content

Weeks 1-3: Technology and the Promise (or Threat) of Omniscience

Introduction to course and contemporary notions of the self via technology

Theme of self via technology in relation to omniscience. Selected short stories, essays and a documentary from Borges, Ellison, Ptolemy, Booker, etc.

Weeks 4-7: Technology and Relating to Others

Themes that revolve around how technology enables, or problematizes, our relation to others
Selected short stories, a film and TV episode from Doctorrow, Yu, Esmail, Jonze, etc.

Weeks 8-10: Technology and the Sense of Self

Themes that revolve around transhumanism and other ways technology complicates human identity. Selected short stories, a film and TV episode from Gibson, Dick, Booker, etc.

Weeks 11-14: Interaction with Technology as crucial to Meaning Making

Themes and concepts around how our interaction with technology is crucial to meaning making and thus, sense of self. Works of digital literature and other digital texts to be analyzed during this period from Short, Bouchardon, Barr, Snow, etc.

Weeks 14-15: Review and Wrap-up

Revision techniques, workshops for final evaluation

Summative assignments: final essay outline and begin working on final essay

5. Instructional Approaches and Learning Activities

Learning activities are designed to meet the objectives of this course. The following methods may be used:

Lectures

Film viewing

Class discussions

Oral presentations

Workshops

Group activities

Editing and revising

In-class reading

Reading comprehension exercises

Written feedback on assignments

Evaluation of Learning

• Formative Evaluation

Practice quizzes

Written responses to works

Essay drafts and workshop activities

• Summative Evaluation

Evaluation Activities	%	Tentative Timeline
1 In-class quizzes (best 5 of 6 count)	25%	<i>from</i> Week 3 to 14
2 Midterm essay (in-class)	15%	Week 7
3 Walkthrough	10%	Week 13 & Week 15
4 Infographic Outline	15%	Week 14
5 Final essay (1000 words)	35%	Due during exam period

Midterm Evaluation: The first two quizzes and the midterm essay will be used for the midterm assessment for a total of 25%.

Walkthrough: This evaluation will be split in two, at 5% each. The first part will be a screencast walkthrough of a hypertext narrative students will create in class. The second part will be a walkthrough of their chosen digital game for their final evaluation (see below). If a student does not choose a digital game for their final assignment and choose a novel instead, they will then write a few diary entries which will be the equivalent of a walkthrough. More details will be provided during the course.

Infographic Outline: Students will create an outline for their final essay in the form of an Infographic poster using Piktochart. More details will be provided during the course.

Final Evaluation: The final evaluation for the course competency will be the final essay for a total of 35% of the final grade. Students will select from a list of works (digital games or a novel) at the beginning of the course and choose a text that they will analyze and use for their final essay at the end of the course.

- **Submission of Work**

Students must use APA formatting and citation styles for their typed assignments. All assignments must be submitted on paper; electronic submissions will not be accepted. Students must present their oral and write their quizzes on the scheduled date. **There are *no* makeup opportunities for the quizzes for any reason; however, only the best 5 of 6 quizzes will count, which will allow students to miss one quiz without it unduly affecting their grade if they write all the others.**

6. Policies

a. Attendance (IPESA 5.2)

Students are expected to attend all class sessions (including labs, field trips, etc.) and scheduled examinations. They are responsible for all material missed due to absences, even when the reasons are acceptable. They are also responsible for completing all assignments, tests, and examinations. For more information related to excused absences, please refer to IPESA 2.7, and 5.2.1.

Students may ask for an extension on the paragraph assignments and essay, but must do so face-to-face with the instructor before the due date. Students who fail to write an in-class evaluation as a result of an unexcused absence will receive a grade of zero for that particular activity.

When students miss 10 percent or more of the total course time because of unexcused absences, they may be prohibited from further attendance and assigned the grade earned to-date in a course as the final grade for that course.

Excessive Absences

When a student misses more than 20 percent of the total course time (classes, labs and/or internship) due to a combination of excused and unexcused absences, the student must meet with the teacher and may be required to meet with the Academic Dean to determine if and how the student can complete the course requirements within the current academic session or other timeframe agreed upon by the student and the teacher (IPESA 5.2.3).

- **Lateness, Patterns of Lateness**

Students who arrive late to class must enter quietly. If the instructor or other students are disturbed, the student may be asked to leave.

- **Late Assignments Policy and Penalties**

Students are responsible for the completion of all assignments to be submitted on due dates. Students who skip their oral presentation will receive a grade of zero. Late written assignments will lose 5% of the grade per day, including weekends.

- **Rough Drafts, Re-writes, Use of the Writing Workshop**

Students are encouraged to show the instructor drafts of essay intros, outlines, reference lists, etc.—in person, not through an emailed demand. Verbal feedback will be provided.

Students who experience difficulties in writing English will be required to take part in such support activities as the English Peer Tutoring Service. However, students must check with their instructor before taking any unmarked work to the Peer Tutoring service. Because students will also be evaluated on organization and expression, students are not allowed to take any unmarked work to the Writing Workshop.

Students cannot take their assignments to the Reading and Writing Workshop without the teacher's permission until after these assignments have been marked.

- **Student Conduct**

Students are prohibited from using electronic devices in the class. Activities such as texting, phoning, emailing, web surfing, snapping photos, etc. are prohibited and may result in the student being required to leave class. Students who disturb the class by chatting, bullying others, habitually entering or leaving during lessons/ discussions/ tests will be asked to leave and will not be allowed to return until they consult with the teacher. For more information on student conduct, consult the IPESA 5.3.

• **Champlain-Lennoxville Procedure regarding Academic Dishonesty**

Cheating and plagiarism are serious forms of academic dishonesty that are completely at odds with the values of the College and will be dealt with severely. They are an offence against the College, one's instructor and one's peers.

Consequences

As per IPESA 5.4 Academic Integrity, the Academic Dean keeps a record of all confirmed instances of plagiarism and/or cheating across courses and programs at Champlain-Lennoxville.

- 1st instance: the student receives a grade of zero on the evaluation and may be mandated to do additional work.
- 2nd instance while at the college: the student receives a grade of zero in the course in which the incident occurred.
- 3rd or subsequent instances while at the college: the student receives a grade of zero in the course in which the incident occurred. A record of the incidents of academic dishonesty will be placed in the student's permanent file.

For more information, consult the complete local procedure regarding academic dishonesty on Champlain Lennoxville's website.

7. Materials and References

The following textbooks are *required* for the course.

The Self via Technology Course Pack (available at the reception desk)

A list of digital literature and digital games will be provided for students to select from.

NB to students: this course is offered by the English department, should you have an issue or problem in the course that you have not been able to resolve with your teacher directly, please contact one of the English department coordinators, Brandon Moores (office C331) or Rebecca Schwarz (C333).

APPENDIX C

Screencast Walkthrough Guidelines

COURSE: 603-103-MQ – Self via Technology

INSTRUCTOR: Nolan Bazinet

Summative Evaluation: Screencast Walkthrough (2 @ 5% each)

Due Dates: November 14 (Hypertext narrative) November 28 (Game)

Objective: You will create a screencast walkthrough of a variety of digital texts. After which you will post on YouTube and send me the link.

Walkthrough 1 – Due November 14 (5%)

Objective: You are to create a general hypertext narrative and perform a walkthrough of it, explaining the reasons why you have created particular choices, used particularly literary and gaming elements discussed in class.

Special attention will be made to the integration of literary and gaming terms (minimum of three).

These terms will be implicit in the hypertext narrative, but made explicit through the walkthrough. The walkthrough must provide a minimum of 10 choices and be approximately 750 words.

Evaluation rubric:

Category	Excellent	Very Good	Minimally Adequate	Poor
Content 15	Incorporation of gaming and literary concepts is done perfectly. Student applies and justifies each concept excellently. 15-13.5	Incorporation of gaming and literary concepts is very well done. Student applies and justifies each concept very well. 13-11	Incorporation of gaming and literary concepts is adequate. Student applies and justifies each adequately. 10-9	Incorporation of gaming and literary concepts is poor. Student applies and justifies each poorly. 7.5-0
Language 10	There are no language errors in the hypertext narrative or in the oral communication	There are few language errors in the hypertext narrative or in the oral communication of	There are some language errors in the hypertext narrative or in the oral communication	There are major language errors in the hypertext narrative or in the oral communication of

	of the walkthrough (grammar, syntax, spelling) 10-9	the walkthrough (grammar, syntax, spelling) 8-7	of the walkthrough (grammar, syntax, spelling) 7-6	the walkthrough (grammar, syntax, spelling) 5-0
Creativity 5	Student demonstrates interesting and varied choices with well-developed literary elements and a lack of predictability. 5-4	Student demonstrates moderately interesting choices with some developed literary elements and little predictability. 4-3.5	Student demonstrates adequate choices with little developed literary elements and some predictability. 3.5-3	Significant lack of varied choices with under-developed literary elements and much predictability. 3-0
Total				

Walkthrough 2 – Due November 28 (5%)

Objective: You are to perform a walkthrough of your chosen game.

Special attention will be made to the integration of literary terms as well as concepts discussed in this class (procedural rhetoric, multimodality, gaming terminology, etc.) in relation to your chosen game.

The walkthrough must be recorded for 5 minutes at any point in the game.

Evaluation rubric:

Category	Excellent	Very Good	Minimally Adequate	Poor
Content 15	Frequent engagement with the text and often employs gaming and literary terminology when appropriate. 15-13.5	Regular engagement with the text and employs some gaming and literary terminology when appropriate. 13-11	Seldom engagement with the text and barely employs gaming and literary terminology when appropriate. 10-9	No engagement with the text and never employs gaming and literary terminology when appropriate. 7.5-0
Language 10	There are no language errors in the walkthrough	There are few language errors in the walkthrough (grammar,	There are some language errors in the walkthrough	There are major language errors in the walkthrough (grammar,

	(grammar, syntax) 10-9	syntax) 8-7	(grammar, syntax) 7-6	syntax) 5-0
Self-Reflexivity 5	Frequent demonstrations of self-reflexivity, questioning the game and frequently demonstrating a variety of critical stances towards the text. 5-4	Regular demonstrations of self-reflexivity, questioning the game and often demonstrating a variety of critical stances towards the text. 4-3.5	Seldom demonstrations of self-reflexivity, questioning the game and rarely demonstrating a variety of critical stances towards the text. 3.5-3	Little to no demonstrations of self-reflexivity, questioning the game and barely demonstrating a variety of critical stances towards the text. 3-0
Total				

Questions to consider when playing:

GAMEPLAY

How can you apply gaming terms (procedural rhetoric, interactivity, multimodality) to your chosen game?

Are there any difficult parts? If so, how did you get by them?

Did you do any paratextual readings (online forums, walkthroughs, etc.)?

LANGUAGE

Are there any words or terms you don't understand?

What do you notice about the language, rhetorical elements in the game?

LITERARY

How can you apply literary terms to your chosen game?

What cultural values emerge from the game?

APPENDIX D

Developing Multiliteracies with Digital Games and Digital Literature in a College-level English Course

Information and request for consent for your participation in a research project

Dear student,

Your consent for your participation in a research project conducted by a doctoral student is requested. This research project is part of a Doctoral program in the Department of Education at the Université de Sherbrooke. For this research, students will complete two questionnaires (one, on November 3, the other on November 23). Both administered in the computer lab during class time and completed through Survey Monkey of approximately 5 questions about their experience with digital games and digital literature, as well as their attitudes and interests. These questionnaires will take approximately 10 minutes so students who choose not to participate in the study will be asked to use this time for quiet reading. The researcher will also conduct focus groups with students on a voluntary basis that will take place outside class time (approximately 25 minutes) and will be recorded (audio only). The researcher will also collect observations notes during the classroom, and analyze students' evaluations (walkthroughs, final essay) for data in regards to multiliteracy attainment. The information collected as a result of this research will help teachers better meet the multiliterate needs and interests of students attending English language courses in colleges throughout Quebec. Your participation is voluntary and requires your full and informed consent. However, you may refuse to participate or withdraw from the study at any time without penalty. Your mark for the course will not be affected in any way, whether or not you choose to participate.

To preserve anonymity, you will not be required to put your name on the questionnaire and the data will be securely saved in a computer file under the responsibility of the lead researcher, Nolan Bazinet, Université de Sherbrooke. Only the lead researcher will have access to the data, which will require a password to view. To allow for the dissemination of research results, data will be kept for 5 years after the end of the project and then destroyed. Publications and oral communications related to this research are aimed at the educational community and for the ongoing training of teachers. The data does not allow specific identification of participants. On request, you will be sent a summary of the research results. Please note that you have the right to refuse your participation in this research without prejudice. You can withdraw at any point in time, by simply informing the teacher, even if you had agreed initially to participate, without any prejudice or fear of reprisal.

It would be appreciated if you would complete the attached form to allow us to carry out the planned data collection as part of our research. You are invited to keep the second copy for future reference if desired.

Thank you for your contribution to our knowledge of multiliteracy development, attitudes and interests in digital games and digital literature.

24/10/2016

Nolan Bazinet

PhD Candidate

Département de pédagogie, Faculté d'éducation

Université de Sherbrooke, Sherbrooke, QC J1K 2R1

819-564-3666 ext. 188

nolan.bazinet@usherbrooke.ca

PARTICIPANT CONSENT

Developing Multiliteracies with Digital Games and Digital Literature in a College-level English Course

PLEASE RETURN TO YOUR CLASSROOM TEACHER

I understand that my class will be participating in the research project, **Developing Multiliteracies with Digital Games and Digital Literature in a College-level English Course** conducted by Nolan Bazinet as part of a PhD research project from the Université de Sherbrooke. The research aims to better understand multiliteracy development using digital games and digital literature.

I, the undersigned, understand that the research program for which my participation is requested will take place during the school year 2016-2017. My participation consists of completing two questionnaires on my digital game playing habits, interests and attitudes, attending focus groups on a voluntary basis, allowing the researcher to document observations notes of the classroom, and to potentially analyze my evaluations (walkthroughs, final essay). My participation is voluntary and I can refuse to participate without prejudice.

Upon request, I can get a summary of the research results.

Participant name

Participant signature

Date

Please sign both copies.

Keep a copy and return the other to your teacher by: _____

This project has been reviewed and approved by the Ethics Committee of Research Education and Social Sciences, University of Sherbrooke. This approach aims to ensure the protection of participants. If you have questions about the ethical aspects of this project (consent to participate, confidentiality, etc.), please contact Mr. Eric Yergeau, Chairman of the Committee, at the following number : 819-821-8000 ext 62644, or by email at: ethique.ess@usherbrooke.ca.

APPENDIX E

Focus Group Guiding Questions

What are your general feelings about this genre of digital text?

Did you encounter any difficult parts of the text? If so, how did you surpass them?

What topics do you see emerge from the text? What role does technology play in relation to understanding (or relating to via procedural rhetoric) these topics?

APPENDIX F

Table of Potential Literacies Articulated

L2 Literacy		Media Literacy	
Context (field notes, focus groups, screencasts, essay):	Textual citation:	Context (field notes, focus groups, screencasts, essay):	Textual citation:
Digital Literacy		Information Literacy	
Context (field notes, focus groups, screencasts, classroom discussion, etc.):	Textual citation:	Context (field notes, focus groups, screencasts, classroom discussion, etc.):	Textual citation:
Technological Literacy		Critical Literacy	
Context (field notes, focus groups, screencasts, classroom discussion, etc.):	Textual citation:	Context (field notes, focus groups, screencasts, classroom discussion, etc.):	Textual citation:

Cultural Literacy		Other Literacies not considered	
Context (field notes, focus groups, screencasts, classroom discussion, etc.):	Textual citation:	Context (field notes, focus groups, screencasts, classroom discussion, etc.):	Textual citation:

APPENDIX G

Gone Home 19.99 PC/MAC ON SALE FOR 10.99 UNTIL NOVEMBER 1

The Walking Dead 24.99 PC/MAC ON SALE FOR 6.99 UNTIL NOVEMBER 1

The Path 9.99 PC/MAC ON SALE FOR 5.49 UNTIL NOVEMBER 1

Stanley Parable 16.99 PC/MAC

The Beginner's Guide 10.99 PC/MAC

1979 Revolution 11.99 PC ONLY

Her Story 6.49 PC/MAC

Papers Please 9.99 PC/MAC

APPENDIX H

603-103-MQ-Literary Themes Final Essay Assignment (Approximately 1000 words)

Date: Friday, December 9, 2016

Grade value: 35% of the final course grade (summative assignment)

INSTRUCTIONS:

Write a 1000-word essay, analyzing the video game you played throughout the course and exploring what you believe is one main idea the game communicates. You will apply concepts and terms (literary, game studies, etc.) that we have looked at in the class.

Your essay must include the following elements:

- Analysis of text (literary terms, game studies terms, etc.)
- Sociohistorical or New Historical analysis of the game
- Critical response to the game
- Minimum of two references

Be sure to double-space your essay and include a references page. You can use either MLA or APA reference style, but be consistent.

EVALUATION CRITERIA:

Critical Content: 40% - Comprehension of assigned texts, following assignment instructions, correct use of critical terminology, logical presentation of ideas, development of an argument, use of supporting evidence in the form of quotations and summary.

Structure and Organization: 30% - Development of a clear thesis statement, coherent introduction and conclusion, well-structured paragraphs, transitions and links between ideas, appropriate tone, etc.

Writing Style: 30% - Grammar, syntax, spelling, clarity, evidence of editing/proofreading, etc.

THINGS TO REMEMBER IN ESSAY WRITING

- Use the present tense
- Do not use 'I', be objective
- Do not simply re-tell the story of the game, keep your summary brief
- Give your essay a creative title

APPENDIX I

603-103-MQ-Literary Themes

Infographic Outline

Date: Monday, November 28, 2016

Grade value: 15% of the final course grade (summative assignment)

INSTRUCTIONS:

Create an infographic poster using Piktochart that will serve as an outline for your essay (see Final Essay instructions). You will present the poster by performing a screencast walkthrough.

Your outline must summarize the contents of your essay. It must include:

- Introduction (thesis statement)
- Elements of body paragraphs (main points)
- Conclusion (wrap-up, final comment)

EVALUATION GRID:

Category	Excellent	Very Good	Minimally Adequate	Poor
Content 10	All elements (intro, body paragraphs, conclusion) are included and perfectly developed and explicated. 10-9	Most elements (intro, body paragraphs, conclusion) are included and well developed and explicated. 8-7	Some elements are missing and/or (intro, body paragraphs, conclusion) adequately developed and explicated. 7-6	Many elements are missing and/or are poorly developed and explicated. 5-0
Language 10	There are little to no language errors (grammar, syntax, spelling) 10-9	There are few language errors (grammar, syntax, spelling) 8-7	There are some language errors (grammar, syntax, spelling) 7-6	There are major language errors (grammar, syntax, spelling) 5-0
Creativity 5	Student demonstrates creativity, often going further than the standard infographic provided.	Student demonstrates some creativity, though not necessarily going further than the standard infographic	Student demonstrates little creativity, not going further than the standard infographic provided. 3.5-3	Significant lack of creativity and a under-developed poster. 3-0

	5-4	provided. 4-3.5		
Total				