A PHENOMENOLOGY OF FOSTERING LEARNING:

ALTERNATE REALITY GAMES AND TRANSMEDIA STORYTELLING

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This dissertation presents the essence of the experience of instructional designers and instructors who have used alternate reality games (ARGs) and transmedia storytelling (TS) for teaching and learning. The use of game-like narratives, such as ARGs and TS, is slowly increasing. However, we know little about the lived experiences of those who have implemented such transmedia experiences in formal or informal learning. The data consists of written transcripts from interviews with 11 co-researchers in the United States and Europe. Phenomenology was the guiding methodology. The study begins by reviewing storytelling and the use of games in learning, leading up to exploring the tradition of using ARGs and TS in learning contexts. The analysis was one of reduction leading to codes, summary stories, themes, and the essence of the experience. Co-researchers used many techniques to enlighten their learners including problem-solving, critical thinking, collaboration, encouragement, disruption, and connection-making. When successful, connection-making facilitates learner agency development by providing learners with the power to act by their own initiative. Action came through the communicated narratives and games that closely tied to real-world problems. In the context of these efforts, this study's co-researchers emerged as educational life-world learning coaches, “sensei,” who were each using strategies and techniques to move students toward meaningful real-world learning and the ability to make a difference in the world. The dissertation closes by exploring implications of this study for instructional designers and instructors interested in using alternate reality games and transmedia storytelling for teaching and learning purposes.

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TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

Autobiographical Statement

I am an instructional designer and teach instructional design. Professors of instructional design experiment with new technologies to make learning both interesting and engaging to learners without losing focus on the learning outcomes. As instructional designers or professors of instructional design, we work with subject matter experts, suggest guidelines for clients, and design instruction that is effective and efficient. Objectives are tied to learning activities and the assessments, and we include technologies as vehicles when they enhance the learning experience and improve delivery. Our field is a pragmatic one and often we take the approach that "works." Pragmatic here means that we often deal with problems and issues with a logical and reasonable way, as they occur, rather than by means of ideas or theory (Merriam-Webster, n.d). This does not, however, stop us from experimenting with tools and ideas and theorizing when working on enhancing learning.

To be a professor of instructional design means possessing many competencies. The International Board of Standards for Training, Performance and Instruction (Ibstpi.org, 2012) notes that there are 17 competencies for instructors, and an additional five for instructional designers. The first competency mentioned by IBSTPI for both instructor and instructional designer is to be a "good communicator"—perhaps the most important competency for a professor of instructional design. We learn and teach through communication. To be effective, the professor should be confident in their knowledge, communicative, and be able to empathize with their intended audience. It is imperative for a professor of instructional design and an instructional designer to teach and/or design a curriculum that reaches students or trainees helping them learn; as such, I am an instructional designer intrigued by the incorporation of

various technologies and new media—multimedia—in teaching and for learning using known theories, strategies, and methods to design effective and efficient learning.

What theories and strategies have instructional designers and instructors come to lean on with their multimedia practices? What are their experiences? Because I had these unanswered questions, I wanted to study and learn from instructional designers and instructors alike what it is to them to use, in particular, the learning spaces of alternate reality games (ARG) and transmedia storytelling (TS) to educate. My goal was to both immerse myself in their experiences as shared through interviews and see these experiences from their point of view; further, I sought to understand the essence of their lived and shared experiences.

This first chapter of this dissertation introduces the research topic and shares a transitory overview of ARG and TS for teaching and learning, which framed the study. Following, the chapter segments the purpose of the study, the research questions, and a brief introduction to the guiding research methodology—phenomenology. The chapter concludes with a summary of how the study contributes to the shared body of knowledge.

Statement of the Problem

Henry Jenkins, professor at the University of South California (USC) Annenberg School for Communication and Journalism and the USC Annenberg School of Cinematic Arts, is credited to have popularized the terminology "transmedia storytelling" (TS). Alternate reality games (ARG) and TS are still new occurrences within education. Both are transmedia in that they cross technology-communication platforms. Related activities include hunting, gathering, seeking, sharing, problem-solving, and critical thinking activities. Instructional designers and

instructors have used ARGs and TS for at least eight years. What began as a marketing strategy now provides a method to introduce curricular content to students.

Instructional designers strive to stay on the forefront with new technologies to enhance curriculum and instruction to make learning both effective and efficient. Instructional designers advance curriculum in the classroom through careful analysis, design, development, implementation, and evaluation methods. We share solid and innovative educational, technology-based ideas and solutions with clients and work closely with subject matter experts. However, we know little about what it is to instructors and instructional designers to teach using ARGs and TS. A small number of research papers, book chapters, and informal reports on their use in formal learning exist, and those are centered mainly on few participants and narrow subject areas. A number of blogs, websites, and articles share how multimedia game-like narratives have been used informally for teaching and learning. This study is relevant to the field of learning technologies and education in general because we need to understand what it is to designers and instructors to use ARGs and TS to support learning. As such, the question that guided this research was: what is teaching with alternate reality games and transmedia storytelling to instructors and instructional designers and how does this reveal itself? Knowing the answers to these questions can empower instructional designers to assist other instructors or designers interested in incorporating similar experiences by guiding for or against this use, depending on the situation.

Phenomenology is the study of things as they appear to the perceiver and has descriptive power rather than the explanatory intent of the natural sciences. This study looked into the intentionality and lived experiences of the participants, to gain insight into the culture of teaching, both formally and informally, with alternate reality games and transmedia storytelling.

The study contributes to the knowledge base on the use of these game-like narratives by answering the overarching question:

> "What is teaching with alternate reality games (ARGs) and transmedia storytelling (TS) for instructors and instructional designers and how does it reveal itself?"

Additional, sub-research questions are presented on page 6 and in Chapter 3.

Purpose of the Study

The purpose of the study was to examine the lived experience of instructional designers and instructors who have taught with ARGs and/or TS. By conducting in-depth interviews with instructional designers and instructors in the United States and Europe about their experiences with teaching with ARGs and TS, this study sheds light on what it is to design, teach, and deliver learning using game and narrative-infused learning. The chosen methodology used to arrive at the very personal lived experience of these professionals was *phenomenology*. This allowed the essence of the experience to emerge from the collected data. Phenomenology is detailed in Chapter 3.

Research Question

In phenomenology, intentionality plays an important role as it signifies the orientation of the mind, or consciousness (Moustakas, 1994), and every intentional act has an object which it contains (Cahoone, 2010). Crotty (1998) explained that "subject and object, distinguishable as they are, are always united" (p. 45) and he asserted that this is captured in the term "intentionality" itself. He further noted that as humans, we need to repeat to ourselves that a tree, for instance, as an object in the world, a noema, is a phenomena we have constructed in our

minds and given a name. The word ‘phenomenon’ is Greek and as an expression, it stands for “established as what shows itself in itself, what is manifest” (Heidegger, 2010, p. 27). Moustakas (1994) noted that in phenomenological research, the question asked should focus on inquiry that will cover a topic that has “both social meaning and personal significance” (p. 104). He also emphasized that each word should bear meaning, commit to the study, and clarify the examination to make it apparent what was studied. Phenomenological research is immersive because it is engaged in something that is of great interest and has much meaning to the researcher. Moustakas noted that a human science research question has specific characteristics, or specific features (p. 105):

1. It seeks to reveal more fully the essences and meanings of human experience;
2. It seeks to uncover the qualitative rather than the quantitative factors in behavior and experience;
3. It engages the total self of the research participant, and sustains personal and passionate involvement;
4. It does not seek to predict or to determine causal relationships;
5. It is illuminated through careful, comprehensive descriptions, vivid and accurate renderings of the experience, rather than measurements, ratings, or scores.

Moustakas (1994) also emphasized that “a researcher’s excitement and curiosity should inspire the search. One’s personal history brings the core of the problem into focus” (p. 104). In keeping with this idea, I have been interested in instructional design for many years, as it informs how we can best design effective, efficient, and appealing instruction in today’s learning environments. I am fascinated by how we can incorporate multimedia, games, virtual worlds, social media, and transmedia into our classroom environments to engage students in learning.

This is especially true given that there is no simple and clear-cut answer as to whether incorporating these components will help or hinder learning. Much research remains to be done before we can say what the affordances of such multimedia learning experience may be.

In this study, I aligned mostly with the phenomenology research methods holistically outlined by Creswell (2013) and Moustakas (1994) but also means of including rigor described by Colaizzi (1978) and van Kaam (1966). Through interviews with instructional designers and instructors I arrived at the essence—or idea—of the interviewees' experience of teaching with ARG and transmedia storytelling. The overarching research question in this study sought to answer:

- What is teaching with alternate reality games (ARG) and transmedia storytelling (TS) for instructors and instructional designers and how does this reveal itself?

Additional related research questions were:

- What is it that makes the transmedia learning experience different from traditional pedagogical pursuits?
- What are the learning theories/strategies that guide alternate reality games and transmedia storytelling experiences?
- How does alternate reality games and/or transmedia content creation fit into the delivery of curriculum? How does student engagement with the content delivered over various media and platforms play into the classroom learning and the overall learning environment?

The interview questions used to address the above research questions are presented in Appendix B. The questions were formulated as semi-structured questions to allow the researcher flexibility to ask follow-up questions when the co-researcher, the interviewee, contributed

something that needed to be further explained or required clarification. Semi-structured interview questions, as noted by Mack, Woodsong, MacQueen, Guest, and Namey (2005) permitted the interviewing researcher to assess and evaluate the qualitative data during the data collection phase to build theoretical saturation.

As a starting point for this study, the interview questions were built on what we know, i.e., such as information gained from scholarly research articles and books related to instructors using ARGs and TS for teaching and learning. New terminology was explained to interviewees before a question was formulated or asked, and ambiguous and culturally inappropriate questions were avoided. All questions were inspired by the researcher's particular muse into the topic and were framed to answer the overarching research question. Prior to submitting the institutional review board (IRB) paperwork, the interview questions were shared for feedback with three experts for feedback on question formulation who were in the instructional design and teaching field, knowledgeable on games, multimedia, and/or the use of social media in educational settings. This allowed for crosschecking that the questions were appropriate and targeted to answer the posed research questions.

Creswell (2008) noted that "purposeful sampling" involves approaching "intentionally selected participants or sites" (p. 214). In this study, a small number of pre-identified instructors were initially and intentionally approached and asked to participate because I did not know all the best people to approach. However, toward the end of individual interviews, I asked each interviewee to recommend other instructors or instructional designers that could be of interest to interview which led to purposeful sampling of individuals not anticipated. This broadened the study sample through what is known as "snowball sampling" (Creswell, 2008, p. 217) and avoided an overly selected sample.

Assumptions

Without certain assumptions, there would be no study to employ. Assumptions are what we take for granted about the topic, participants, current state of knowledge, as well as what we accept as true, and how we stand in this world, which is observable to us (Brookfield, 1995), and our perception predicting what will be and will happen. I have identified these beyond-my-control delineations at the initiation of this study and these included the following:

- To engage in phenomenology, I needed to have subjects as co-researchers. I assumed that I would be able to find a minimum of eight, but ideally up to eleven, professionals.
- All must have practiced instructional design or teaching and learning using either ARGs or TS, and who were willing to be my co-researchers.
- I envisioned that my co-researchers would help me find others to interview, as needed, by sharing names with me (snowball sampling).
- I presumed that by accepting to be co-researchers, co-researchers would find the study of interest to them and share freely in the interviews from their inter-subjectively, lived experiences, relating to what it means to design and teach using cross-media narrative.
- As co-researchers in my study, I assumed these professionals would allow me to mention them either by name or, if they preferred anonymity, with a pseudonym. As co-researchers, I further assumed their interest in the study would make them want to see the study completed but, if they wanted to withdraw from the study, they would be able to do so as their participation would be of a voluntary nature and withdrawal would have no consequences for them.

Researcher World View

As a qualitative researcher, I believe that each person will have an individual viewpoint based on their personal experience. Therefore, in this study I asked each co-researcher to share their individual experiences from using ARGs and/or TS for teaching and learning purposes. Using phenomenology, which is described in the methods section, I further assumed I would be able to draw the essence of their shared experiences.

Moustakas (1994) noted how "descriptions keep a phenomenon alive, illuminate its presence, accentuate its underlying meanings, enable the phenomenon to linger, retain its spirit, as near to its actual nature as possible" (p. 50). From this idea, I believed I could explicate the co-researchers' shared experience from the interviews that they shared with me, and that I would develop an understanding of the noema as seen from their perspective—not only from the perspective of the researcher I am, but also from the perspective of being a game and storytelling community member myself. Heidegger (2010) noted: "Every questioning is a seeking. Every seeking takes its beforehand from what is sought. Questioning is a knowing search for beings in their thatness and whatness" (p. 4). To avoid subjectivity is unavoidable; however, it is possible to minimize it. To do so, I employed *epoché.* This method required that the researcher bracket the natural standpoint. I also shared my own personal view in a subjectivity statement, which is detailed in Appendix A and attempted to understand from my perspective the shared experiences based on the co-researchers' written transcripts. Epoché was developed by Husserl in 1905 (Kersten, 1989; Moran, 2000) and is a procedure of bracketing where the researcher puts aside the thesis of the natural standpoint and personal "beliefs about our beliefs" (Moran, 2000, p. 146). Epoché served as one of several means of validity establishment in this research study and is further discussed in Chapter 3.

Rationales

This dissertation was written for my committee to consider as my dissertation research study. In it, I used phenomenology to study instructional designers' and instructors' lived experiences of ARGs and/or TS for educational purposes. The study was completed as the required study, partial completion of the degree of Doctor of Philosophy in Learning Technologies from the Department of Learning Technologies with a minor in Philosophy from the Department of Philosophy and Religion Studies at the University of North Texas.

Objectives of the Study

The purpose of this study was to determine the essence of the experience among designers and instructors who use alternate reality games (ARGs) and/or transmedia storytelling (TS) to educate. Exploring, from their experiences, what it is to use ARGs and TS will guide others in our field to innovate with new designs, techniques, and technology, further suggest for or against use of these game-like narratives. At the onset of this study, few designers and instructors were documented in their use of ARGs and TS for learning, which is why researching this topic will contribute to the general knowledge base.

Research Methods

Phenomenology

When employed, phenomenology research methodology is used to seek the essence of the lived experience of a group of people (Creswell, 2013; Moustakas, 1994). Data for this purpose was collected through digitally recorded in-depth interviews with the participants, also referred to as co-researchers. Additionally, I asked follow-up questions over e-mail, and asked

those willing to respond to share aesthetic expressions and any other artifacts they felt were of interest. Several of the co-researchers responded by referring me to their websites for additional information about their work.

Interviews were transcribed using ExpressScribe software. The software allows for the attachment of a foot pedal to the computer using a universal serial bus (USB) port. This allowed the researcher to easily pace the transcription of interviews and move forward and backward in the audio recording capturing the entire interview. Written transcripts of co-researcher experiences provided the data.

Peer review

In phenomenological research a peer review, an external check of the research—"intersubjective concurrence with other experts concerning the agreement" (van Kaam, 1966, p. 315)—can be completed and helps provide additional rigor and "keeps the researcher honest" (Creswell, 2013, p. 251). The interview transcripts were read several times by the researcher and two peer reviewers individually allowing for the identification of significant statements, and codes. Later the researcher met with the peer review team and discussed codes to arrive at 100% agreement and to form themes and let the essence of the experience emerge. The methodology is detailed in Chapter 3.

Operational Definitions

While this is a phenomenological study and, as such, allowed some deviation from exactness, there were measurable variables in place that may have impacted the overall study, such as the selection of the participants. Some of the key terms included in the study are listed below followed by operational definitions within the context of the study.

ARG—Alternate Reality Game. An immersive story told in fragments (clues) where players have to piece together the clues to proceed forward in the narrative toward solving a larger puzzle.

Augmented reality—an overlay over the real world created through technology.

Co-creation—the development of media by means of merges with pre-existing media.

Consciousness—the individual's mental awareness of surroundings and experiences.

Constative—a back-and-forth communicative act among participants in dialogue.

Co-researcher—interviewee with active participatory role in the research.

Cross-media—see transmedia.

Cyberspace—online environment allowing for individual lived experiences disconnected from body but with conscious presence.

Dramaturgical—individual expression shared and consciously critiqued by others.

Eidetic—from the Greek word eidos. Form or Idea, as in Plato.

Intentionality—the minds' ability to create representations (objects) of ideas and things.

Lifeworld—the everyday life within which we live, where we encounter situations, challenges, joy, sadness, our relations to others is referred to as lifeworld (Habermas, 1984; van Manen, 1990; Bernstein, 1976).

Medium—an agency to transport to the senses.

Noema—the phenomena as an experience—the perception as seen by the perceiver—a construct of the perspective and the definition of the perceived meanings [what].

Noesis—intellection. The intentional initial meaning without applied bracketing [how].

Pragmatic stance—a way to approach problems and issues as they occur in different situations in a fair, practical, and logical way rather than turning to theory and ideas for answers on how to approach the problem or issue (Merriam-Webster, n.d).

Transmedia—transmedia is also known as cross-media (Jenkins, 2010), distributed narrative, and deep media (Jenkins, 2010, Pence, 2012).

Transmedia storytelling—a story delivered over various media.

Participatory culture—a culture of active participation, content production, and sharing.

Phenomena—things as they appear.

Phenomenology—philosophy of, or study of, phenomena.

Protagonist—the most important character or actor in a story or plot.

Synergistic—collaborating as a group for an enriched outcome.

Limitations

No study is without limitations. In this study, several limitations are evident:

- The sample size was small but substantively representative, as the number of instructional designers and instructors who have implemented ARGs and TS for learning is small.
- My focus was on finding co-researchers in the United States and Europe, which left out interesting experiences that could have been shared from the vantage point of residing on other continents.
- On the two continents included, I was unable to reach all potential participants, was unaware of all, and therefore unable to contact all and ask for their participation.

- This study has an underrepresentation of female co-researchers (2 out of 11) why looking at varying experiences based on gender was unfeasible.
- Additionally, a limitation that I saw as possible prior to starting any interview, was that an interviewee could have had a bad day leading to unwillingness to share as much as he or she would have shared, on a good day.
- Another related limitation was that co-researchers were asked if they would be willing to participate with their name in this study, which 10 out of the 11 co-researchers agreed to. Thereby co-researchers may have been more positive in them sharing their experiences.
- A limitation is also that the researcher attempted to use phenomenology for the first time, while at the same time experimentally exploring the method's usability within the field of Learning Technologies, why the method did not fully follow established researchers' described steps.
- Last mentioned was because a high level of rigor in research is required in the Learning Technologies, and the researcher was unable to use phenomenology as it was originally intended by Edmund Husserl, i.e., as a single researcher study (peer review was necessary).

Delimitations

I chose to include in interviews only instructors from North America and Europe. In making this choice, I chose to limit the scope and thereby exclude instructors of other continents who had implemented ARGs and TS for teaching and learning purposes, thus eliminating learning from them. My choice of methodology both narrowed and focused my findings. Prior to analysis, there was uncertainty whether I would end up finding that, in fact, there is no shared

essence among my co-researchers as to what it is to them to include ARGs and TS in learning. It is a challenge to discover consistency because human experiences vary; therefore, to discover the essence can be difficult.

Summary

This chapter summarized the intent of the research study reported here, which was to seek to answer what the essence of the experience is of instructional designers and instructors who have designed and taught with ARGs and transmedia storytelling for learning. The study's contribution to the field includes the lived experience of the instructors. This is expected to help guide instructional designers and instructors when assisting other professionals interested in incorporating similar learning innovations. Limitations included the relatively small number of available subjects, i.e., designers or instructors that today include such game-like narrative for teaching and learning purposes, the even smaller number of these instructors available to interview, and the requirement of using peer review with phenomenology.

CHAPTER 2 - FRAMING THE STUDY: LITERATURE

Introduction

This chapter includes a discussion on significant literature and research relevant to the topic of using narrative, storytelling, games, and game components for teaching and learning. The chapter begins with a discussion of search methods used to discover appropriate literature and research articles. The literature, which covers philosophy of stories, storytelling, and games for learning in general, was reviewed to provide a backdrop for the proposed study followed by an introduction and review of alternate reality games (ARGs), and transmedia storytelling (TS), and their use for education. A summary of articles found through both database searches and manual searches are included in this literature review and the findings from the search, including specific examples are expounded upon and shared in detail. The chapter concludes with a summary setting the stage for the research question and the study.

Literature Data Collection

The literature presented here comes from various sources, including database searches for research studies where transmedia storytelling or alternate reality games had been used for the purpose of teaching and learning other than in media studies. The articles were chosen to provide both a backdrop setting the stage for the study and to frame the conducted study with an eye toward understanding how learning occurs using these technology and game-like narratives.

The University of North Texas library database ‘Find Online Articles’ was the primary search tool for related research articles. As noted on the UNT library website, the database was created to consolidate the enormous number of databases available to allow for a cross-search of online articles from 6,800 different publishers, and 94,000 journals and periodicals. References

to citations within articles led to additional publications not found through the library search engine. Books and book chapters are also included regarding the use of alternate reality games and transmedia storytelling. However, in education, this topic is still in its infancy and few research studies exist. To complement the findings, some websites and blogs are also included. When these last mentioned, less reliable, sources were used it was so noted.

Storytelling

Storytelling is an ancient and powerful art that allows us to connect with our environment (Pink, 2005; Remenyi, 2012). We share our past through stories, fables, and myths, using stories to persuade, entertain, and inform. Norman (1993) expressed his thoughts on stories this way:

> Stories are marvelous means of summarizing experiences, of capturing an event and the surrounding context that seems essential. Stories are important cognitive events, for they encapsulate, into a compact package, information, knowledge, context, and emotion (p. 129).

Stories carry conflict, action, and goals, and need to include both a plot and subplot (Marks, 2007). Through the transformational development of the protagonist—his or her internal change or his or her emotions—the audience identifies with and may relate to the character. This is vital for a good story, as Marks (2007) shared, adding that, "stories teach us through symbolic experiences how to be human" (p. 18). Fables are but one example of such stories.

Learning through stories

Stories can function as examples while learning is underway (Nicol & Draper, 2008). Fables, for example, explain and share collaborative learning that has occurred in the past, avoiding personification, setting the scene in an animal-humanoid world to disguise real people.

When a new topic is introduced and/or an instructor wants to bring about change within the learner, the use of models, including stories, can facilitate knowledge change (Seel, Ifenthaler, & Pirnay-Dummer, 2013). Using stories can help with content organization because stories allow for sharing of "cause to effect [and] time sequence" (McKeachie and Svinicki, 2006, p. 63). Stories enrich and enhance the learning experience for the audience, make learning memorable, and set examples for good behavior. Stories may even be seen to contribute to recognizing ethics and living a virtuous life.

All through time, humans have attempted to attain knowledge about the world around us and save it for future generations to learn from. Cave paintings show images of the reality of the people who carved and painted them and stories told by the campfire have carried learning from one person to the next. Now knowledge is delivered and distributed on paper, as well as digitally. Siebers (1992) suggested that stories can teach us: "To be human is to tell stories about ourselves and about other human beings" (p. 7). As humans, primarily through our engagements and training, but also though our fictions, we are storytelling observers who throughout history have become "tellers of stories that aspire to truth" (MacIntyre, 2012, p. 216). We learn from tales of and about those before us.

Using stories to share and reflect upon lived and compelling experiences continues to be used around the world to inform. An example of this is, O'Connor's (2003) real life story "Fifty-two stories to an arrest: Bounty hunting." In it is described a 21st century bounty hunter who was hired to track down a fugitive. Over the course of seven months, the bounty hunter stayed on one man's trail and went through various challenges, including losing and re-tracking the fugitive many times. This story of modern-day bounty hunting informs of conflict, difficulty, and a solution to the ill-structured problem of tracking a criminal. Through such real life stories, we, as

newcomers to the tradition of bounty hunting, come to learn about the complexity of problems involved when trying to find a person on the run and we learn alternative ways others have used to address these same problems. In fiction stories, the importance of the narrative and each character's development is not to be overlooked. Good fiction requires a sense of reality.

Fiction, the hero's journey, and phenomenology of stories

A good fictional story blurs the boundaries of what is real and what is fiction (Rose, 2011). In the Massive Open Online Course (MOOC) on the future of storytelling,[1] we can learn that fictional stories require a story and a plot, and necessitate additional efforts from the author to make characters come alive to retain and entice the audience. In the classic design of fiction storytelling, there is a transformative arch that the protagonist—the hero—works his way through while encountering difficulties, challenges, and defeats. He then perseveres, overcomes obstacles, and learns through a change of his character. This journey can be an inner or an outer expedition; that is, the main character will reach an inner understanding or consciousness and change his character towards a more virtuous—better—self. Or it can be a physical journey toward change to reach an ultimate goal. Only after such a hero's journey is the protagonist able to reach his goal. Robert McKee explained story design as involving a life-changing incident where the hero understands that his life is unbalanced followed by a need to fix the problem: To put life back together in pursuit of the good, he must attempt a journey filled with obstacles (Eckerling, 2009, Aug 18). The philosophy behind stories informs of human virtues, something that was further emphasized by Professor Hans-Christoph Hobohm.

Hobohm (2013, November 18) shared in a video lecture that phenomenologists argue that humans are capable of only two kinds of thinking: paradigm and narrative (sense-making). He suggested that stories enable identities that allow us to see ourselves as part of communities.

[1] https://iversity.org/en/courses/the-future-of-storytelling

Without a story, we lack identity with a community, organization, or nation. Stories, Hobohm continued, are mainly narratives between people. With the introduction of writing, Hobohm went on, came liberation—a way to save thoughts (or if seen through Plato's lens—destruction[2], as we no longer need to maintain events in memory, only remind ourselves). New technologies have further changed the ability to share narratives. Bonk (2009) exclaimed, "the world is open!" This new, open world provides opportunities to engage and entertain an audience with self-publishing, allowing anyone with a computer to enter the world-wide arena and tell their personal story. The forward thinking science fiction author William Gibson, penciled in 1984 new technologies that we use today, even before they entered the arena.

New media

Since the late 1990s, the rapid development of the World Wide Web encouraged browsers to emerge, which allowed for pictures and design using html code. Over the last 15 years, we have seen many new technology applications and tools. Previously, viewers could only visit static webpages as passive viewers but these new applications interact between each other and with an audience in a way that was not previously possible. Applications such as YouTube, Wikis, online discussion forums, blogs, FaceTime, and Skype—to mention a few interactive technologies—now allow the audiences to respond through online comments to the digital content. These applications afford immediate communication between people and the means to develop a narrative unheard of in the World Wide Web infancy.

The evolution of what Henry Jenkins (2006) called a "convergence culture" allows the audience to pursue new information and brainstorm with others on the Web and elsewhere. It allows for opportunities to co-create, by mixing, and re-using media. Jenkins described this culture as "the flow of content across multiple media platforms, the cooperation between

[2] Plato: Phaedrus 275a5

multiple media industries, and the migratory behavior of media audiences who will go almost anywhere in search of the kinds of entertainment experiences they want" (Jenkins, 2006, p. 2). Today these media connections make it possible to play collectively games across the globe that were generated through social networks. The distance between players is irrelevant as technology brings them together in a large, online, open space—and anyone who so wishes may participate.

Stories and storytelling games can blur the boundaries of reality and fiction when various technology tools seamlessly create real life and digital life through digital stories. Alternate reality games (ARGs) and transmedia storytelling (TS) are two ways to do this. I shall return to explain the game-rich narratives of ARGs and TS in depth later in this chapter. First, we will explore games for learning though a brief review of the literature.

Games for Learning

Since the last decade, the use of games for learning has increased. In today's classrooms, many digital games are used in formal learning, including video and, simulation games, virtual treasure hunts, virtual worlds, and augmented-reality experiences; further many promising games features have been identified (Mayer, 2014). Among the reasons mentioned in the literature for incorporating games into learning is the suggestion that we should partner with students using the "tools of their time" (Prensky, 2010, p. 2), thereby enhancing learning to make it active, fun, motivating, and engaging (Psotka, 2012) and to ensure that students keep learning (Salen, 2008).

Connolly, Boyle, McArthur, Hainey, and Boyle (2012) reported empirical evidence of how games influenced learning and engagement on an audience aged 14 an up in their literature review of 129 papers. They found that "the most frequently occurring outcomes were knowledge

acquisition/content understanding, which were typically examined in games for learning and affective and motivational outcomes which were typically examined in entertainment games" (p. 671). However, the researchers noted that overall, "evidence that games leads to more effective learning was not strong" (p. 671). Perhaps the engagement and virtue aspect is what drives instructors' designs with games for learning.

This is aligned with what Jane McGonigal (2011) shared when she noted that games are engaging and satisfying as they visualize our labors and our efforts in a way that "mirror back to us a positive sense of our own capabilities and thereby help build self-efficacy" (p. 57). Other scholars have also looked at the motivational and engagement aspects of games. For instance, Annetta (2010) discussed the six "I" elements necessary for serious educational game design. The model Annetta provided could be seen as nested components with identity in the center followed by immersion, interactivity, increasing complexity, informed teaching, and instruction (p. 106). Briefly, the first four components related to:

- Identity—the player as an individual within the game,
- Immersion—the player being motivated and engaged in the game,
- Interactivity—the player being able to communicate and/or collaborate,
- Increased complexity—the player being able to work on a complexity level that fits the player.

The remaining two components Annetta mentioned related to the game mechanics are: a.) setting the learning objectives into place by the instructor/designer (informed teaching), and b.) relating the learning in a meaningful way, to result in the intended objective (instructional). Annetta's work built on research in game design and development literature; he noted that, for a serious educational game, it is the design components—including the well-designed learning objectives,

feedback from the system, and ways to assess the learner—that are the most important pieces of a game.

Annetta's I-elements are not substantively different from Dave Merrill's learner-centered "first principles of instruction" (Merrill, 2002). Merrill's principles have guided instructional design for many years and call for designs where the learner a) engages in real-world problems, b) is able to call-up and build on existing knowledge, c) is scaffolded, for instance, by being shown examples throughout the learning process, d) can, or has opportunity to apply the learning, and e) is permitted to integrate the learning into their lifeworld (Merrill, 2002). The principles are adaptable to all forms of learning, including games for learning.

Young et al. (2012) hypothesized that educational video games would benefit and improve knowledge. Excluding any simulations and visualization tools from more than 300 articles, the authors noted that there was little research evidence to support the use of video games to learn science and math. However, the authors found that there were indeed a few areas of education that may benefit in a positive way from video game implementation/learning, mainly "language learning, history, and physical education" (Young et al., 2012, p. 61). Further, Young et al. noted that the research that had been conducted and documented using their research selection often covered only short implementations. This, they pondered, was perhaps caused by the often-prevalent model of teaching to the test, which may limit implementation time dedicated to experimental game design.

New Realities

Author William Gibson coined the word 'cyberspace' in his 1984 publication *Neuromancer* (Rose, 2011). In this Sci-Fi novel, Gibson referred to cyberspace as "a consensual

hallucination experienced daily by billions of legitimate operators in every nation" (p. 51). When experienced in cyberspace, Ascott (1999) declared that such complex amalgamations of the human mind and technology serve to outline human awareness and an inner sense of being. Ascott's perception on travelling effortlessly into cyberspace with our mind, using technology, while having a presence in the real world opens up an important question. That is, how may our subjectivity and objectivity co-exists when we engage in cyberspace, and how should we use these dual presences for learning. Within the art community, Ascott noted that interactivity—where the audience plays a part—might be representative of a collective perception. '"Double consciousness", he further noted, is our unique experience of the subjective mind and the objective world simultaneously—that of having dual presences. That is, one can have simultaneous presences in reality and in an alternate reality. As an example of the simultaneous presence, consider Pompeii.

Pompeii was a prosperous Roman city in Italy that was the crossroad for travelers on land and sea. In 79 AD, Mt. Vesuvius suddenly erupted and Pompeii was buried in the volcanic ashes. However, the city was well preserved in these ashes; in the mid-1700s excavators discovered beautiful artifacts and paintings depicting the lives of the Romans who lived in Pompeii. For instance, a fresco on one of the walls in the house named Villa of the Mysteries depicts the Dionysus mysteries—a cult that came to the Roman world from Greece. Fresco wall paintings illustrate humans, the humanized Dionysus, and the mythical satires that all merge through their commonalities combining the two realities (Janson, 1978). As visitors file through the room today, they behold ancient Roman rituals and thus, a window into this alternate reality.

For centuries, humans have been enticed by alternate realities represented in such as frescos, as well as stories told by campfires, and literary fiction. Realistic depictions and

descriptions allow us to become part of an imaginary world, momentarily escaping reality while retaining a presence in the real world. However, artifacts and paintings are not the only means of escaping to a distant realty. Games may be used to "reflect the problems of the real world… and go back at least as far as 3000 BC to the Chinese game of Wei-Hai" (van Ments, 1983, p. 14). Playing games combines immersive and captivating story elements with the human desire to escape reality, and the endless new technology applications that allow for expressions and comments, give us new venues that invite us to play.

Such an opportunity to participate in gameplay was described in another of William Gibson's novels, *Pattern Recognition* (2003), where the protagonist, Cayce, is an advertising consultant who specializes in logos and has a well-developed sense for patterns. In the story, she is hired to find the maker of film clips that mysteriously and irregularly appears on the Web and that has caused attention among a group of people who have come together in a discussion forum to try to solve the meaning of the clips. Cayce accepts the challenge to find the maker and ends up deep in an enticing alternate reality game, learning to find not only the next clue of the game but, through her hero's journey, also comes to better understand herself.

The ancient tradition of sharing stories for learning has been passed down through generations not just by immersive, face-to-face tales and myths shared by the campfire, but also through scriptures, murals, poems, theatre plays, and later, books. It has, however, not ceased with these means. The way we share learning from generation to generation has evolved in the last few decades as computers have emerged. The Internet delivers the World Wide Web that today is a vast jungle of information. Pink (2005) noted that the multitude of "widely available and instantly accessible" (p. 103) information on the World Wide Web has challenged us to find ways to contextualize and deliver such information with "emotional impact" (p. 103). Pink

suggested storytelling to be the solution "because it sharpens our understanding of one thing by showing it in the context of something else … [and] stories almost always pack an emotional punch" (p. 103) making them memorable. Information shared through stories, it appears, would contribute to learning as well as improve marketing packaged products.

ARG and Transmedia Storytelling to Mobilize the Audience

ARG and transmedia storytelling experiences are more than reading a book or watching a show on TV. Rather, they are saturated ventures that allow for audience participation and mobilization in a social context. Though their original goals have been to promote new movies or sell merchandise, the experience affords the players participatory roles of seekers, collectors, and contributors to a collaborative problem-solving venture. Such efforts have transformed audience members from passive recipients to active participants who directly shape the direction and development of the story, setting the participants in the center. Davidson et al. (2010) noted how transmedia—or cross-media—are highly people-centered: "designers and developers pay close attention [to] the audience and work to create content that appeals to them and they are also willing to adapt content and how it's delivered across media based on audience responses" (p. 27). An example of such a design is Lance Weiler's near real-world "Pandemic" experience (Andersen, 2011, January 14), explained on the ARGNet website.

Real world problems may be solved using collective intelligence and shared consciousness. Transmedia designer Lance Weiler connected people to help each other learn in "Pandemic," a similar to real-world experience where participants used collective thinking, shared consciousness, problem-solving skills, and their hunting instincts to discover clues planted in the environment, leading them to information about where to find concealed artifacts.

The goal was for participants to recover all artifacts and thereby stop the fictional pandemic before a timer went off. GPS coordinates pointed participants to hidden artifacts while social media and a main website coordinated participants' efforts; all media became important components of a larger experience (Andersen, 2011, January 14).

The quality of this larger experience owes much to the emergence of the World Wide Web, which has truly changed us as consumers of media. Today people share videos, blog, and play games online. They flock to applications such as *Storify* to create their own stories made up of social media truths gathered from sites such as Twitter, Instagram, and Facebook, or create their own alternate reality games for others to play (Szulborski, 2005). While homo sapiens in the Paleolithic society were hunters and gatherers of animals and plants for survival (Bentley & Ziegler, 2011), today we see a society of hunters and gatherers of information within cyberspace for the purpose of solving crime[3], socializing and recreation[4], remixing and content sharing[5], educating, and learning.

ARG and Transmedia Storytelling Background

Transmedia Storytelling

Pence (2012) noted that the concept of transmedia emerged in the 1970s Japan. There it was a media mix of comic books (manga), anime (animated pictures), plastic modeling (figures of the characters), and fiction games called visual novels designed to appeal to the younger otaku[6] audience. This young Japanese audience became immersed in the new media otaku culture, Rose (2011) wrote, and Otaku became a "prequel—a glimpse of the future a connected

[3] See CSI, 2013; O'Connor, 2003
[4] See Arum & Roksa, 2011; Pempel, Yevdokokiya, Yermolayeva, & Calvert, 2009
[5] See Jenkins & Kelly, 2013
[6] The word 'otaku', originates from the formal and polite word 'you'; however, its meaning shifted in the eighties toward "geek, nerd, obsessive" (Rose, 2011, p. 39).

world would bring…A yearning to immerse oneself in stories that transpire in a fictional universe" (p. 40). It is not only the Japanese that value this idea; for example, William Gibson noted the importance of the otaku culture in a March 31st 2001 online Guardian article, emphasizing that comprehending otaku-culture "is one of the keys to understanding the culture of the Web." Many of his fictional stories build on the Japanese culture and techno-savvy Japanese.

The Wachowski brothers, developers of the Matrix movie series, acknowledged that Japanese anime had influenced their work (Rose, 2011). They were, in fact, "among the first artists in the West to embrace Japan's mix strategy, augmenting the story that's told in the films with anime, comics, and video games" (Rose, 2011, p. 43). The *Matrix* provided viewers with rich metaphysical, epistemological, ontological, and mystical concepts. Ideas from philosophers such as Socrates, Plato, Descartes, Berkeley, Baudrillard, Kant, and Nietzsche entwine with the film's plot. The movie, Jenkins (2006) wrote, "took us into a world where the line between reality and illusion constantly blurred, and where the bodies of humans are stored as an energy source to fuel machines while their minds inhabit a world of digital hallucinations" (p. 96). The early movie advertising sent viewers to the Web searching for the answer to the question of what the *Matrix* could be, finding clues across the Internet left by the film's producers.

The concept of transmedia relates to spinoff and emerges in early form in Marsha Kinder's (1991) book *Playing with power in movies, television, and video games: From muppet babies to teenage mutant ninja turtles*. In this book, Kinder wrote about the "intertextuality among television, movies, and toys" (p. 40)—that is, how media and text intertwine. Already in the 1940s, she noted, marketing had begun experimenting with content shared over various

media—efforts that greatly intensified in the 1980s when TV cartoons and commercials for related toys intertwined on the air.

Further, the term "transmedia storytelling" was popularized by Professor Henry Jenkins, now at University of South California. In his book *Convergence culture: Where old and new media collide* (2006). There he explained how transmedia franchisers and filmmakers became increasingly aware of the importance of "expanding the storytelling experience" (p. 8). These filmmakers, he noted, mixed their inventive and artistic ideas with the advantages of different media when creating film. On his blog, Jenkins (2007, March 22) expanded on the transmedia storytelling concept he had begun in the convergence culture book. The more concrete definition he suggested is:

> Transmedia storytelling represents a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story (Jenkins 2011, Aug 1).

He further offered ten facts about transmedia storytelling, including what it represents, reflects, is, serves, practices, requires, disperses, results in, as well as the aesthetic perspectives thereof. (Jenkins, 2011, Aug 1).

A related concept, participatory culture, has been a point of focus for Jenkins and other scholars for a number of years. When at MIT, Jenkins studied participatory culture and the content sharing that youth increasingly engaged with over the World Wide Web. In the McArthur report *Confronting the challenges of a participatory culture*, the authors Jenkins, Purushotma, Weigel, Clinton, and Robison (2009) noted that youth's remixing of materials "requires appreciation of emergent structures and latent potential meanings. Often remixing

involves the creative juxtaposition of materials that otherwise occupy very different cultural niches" (p. 58). Complementary to this was a report from the Pew Internet and American Life Project where it was noted that "today's online teens live in a world filled with self-authored, customized, and on-demand content, much of which is easily replicated, manipulated, and redistributable" (Lenhart & Madden, 2005, p. 1). Further, it was documented that 57% of youth were online content creators; blogging, posting videos, mixing and re-mixing media.

Even though the filmmaker franchise picked up on the ideas of sharing stories over various media as early as 2006, as noted by Jenkins above, the recognition process was slow as Hollywood did not acknowledge nor officially recognize transmedia producers as professionals until April 2010 (Rose, 2011). Regardless of the slow pace of recognizing professional titles, transmedia storytelling has greatly advanced within the last decade, somewhat differentiated from ARGs by becoming either participative or involve synergistic participation (Giovagnoli, p. 112), which is contrasted with alternate reality games that are participatory and collaborative by nature. Transmedia experiences involve collective intelligence; however, they can also involve individual exploration.

Pence (2012) identified two types of transmedia: *experience transmedia* and *framework transmedia* (p. 134-135). He refers this first type, experience transmedia, as individual or collaborative efforts geared toward a unified experience related to franchise or marketing efforts, the second framework transmedia, he explains as an experience "based on a virtual world that is designed to be incomplete" (p. 135). In his elaboration on how he foresees a good future for transmedia in education, Pence suggested this latter, looser framework contributes a good space for explorations, which would then be appealing student involvement. However, Pence also noted that faculty and students both likely need training to become familiar with the format;

while many are already familiar with various media use and are content creators not everyone is up to date on the latest innovations. Training notwithstanding, he felt that the increased prevalence of media experience is promising for those seeking to implement educational transmedia. Similar thoughts were expressed by Educause Learning Initiative report in 2009, as they noted how ARGs may "become common components of a wide range of educational programs, offering students new opportunities to hone their critical-thinking, problem-solving, and collaborative-learning skills" (p. 2).

Alternate Reality Games

The World Wide Web allows new mechanisms for delivery of shared stories and games delivered to players who do not necessarily participate at the same place or time. Alternate reality games (ARGs) are, at their essence, complex story-games told in fragments, designed to reside on the borderline between reality and fiction. ARGs require deep problem-solving and team effort, as these games are often too complex for any one person to solve. Through collaborative strength, the playing community may decipher the puzzle pieces that make up the game. Kim, Lee, Thomas, and Dombrowski (2009) provided a framework for why it is possible for disparate players to collectively solve problems by analyzing several alternate reality games. They found that there are five specific components to be considered for the game to be a true alternate reality game; mainly, they need to include:

- Unconnected problems,
- A common narrative,
- Common participation,
- A puppet master who disburses information over

- Various media platforms, aka multimodality (digital content and physical locations).

Further, the authors concluded that "low entry barriers tend to encourage collective behavior" (p. 14); meaning, the so called 'rabbit hole' that is the starting point of the ARG, should be fairly easy to find and should entice the player to play.

Kim et al. (2009) mentioned that all ARG players do not necessarily need to be equally engaged or motivated. There is a sliding scale that encompasses a core group of devotees who remain with and keep up with the game throughout. This means there are a*ctive players*, *casual players*, and the *curious player*. This last type is sometimes called a lurker who only watches and/or reads without otherwise being a community contributor[7]. ARGs, as Kim et al. also shared, need devotees and active players as "without the players collectively telling and revising the story, the storymasters do not know how to distribute facts and continue to engage the audience" (p. 15). ARGs are thus synergistic in the sense that effectiveness of the game comes from the game designers as well as from the player's mutual need of each other; the players—who function as the game's audience—require to have a voice, and to be a part of the story. ARGs, therefore, cannot be fully designed; instead they need to develop as the game proceeds, because ARGs are a form of participatory and collective storytelling.

Rose (2011) called alternate reality games (ARG) "a hybrid of game and story" (p. 14). Ultimately, ARGs allow for an enriched experience or outcome and are immersive. Although they are designed to be an alternate reality, they remain clearly set in the real world, making it difficult to separate fact from fiction. "That immersiveness is what blurs the line, not just the story and game" (Rose, 2011, p. 15). That is, immersion merges the subjective experience of the

[7] The idea of the lurker is very similar to the concept of the legitimate peripheral participant as defined by Lave and Wenger (1991).

mind with what is in the real, objective world. This fosters the 'double consciousness' concept Ascott (1999) coined.

ARGs are so close to reality that players and designers insist upon using the "This is Not a Game"—TINAG—tagline that marketing executive Elan Lee, came up with during the development of the ARG called *The Beast,* for Warner Brothers (Rose, 2011). The Beast was the very first large-scale, professionally developed ARG, an immersive experience that would introduce and attract the audience to the Spielberg movie *Artificial Intelligence—AI.* The ARG content was intended to take the player beyond the movie to a new dimension of the story to transcend the player herself. *AI* premiered in August 2001; however, the ARG game, which engaged 3 million people, had started 12 weeks earlier (Rose, 2011). In *The Beast,* players sought out cleverly hidden clues that would lead to new clues. The story would unfold during this collaborative quest among the players who engaged to solve the puzzle through discourse over discussion boards (McGonigal, 2003, May). Players interacted and engaged with each other in reaction to an "alternate sequence of events," that was based on reality (Rose, 2011, p. 23). This included listening to a phone message by the game character Jeanine Salla, a sentient Machine Therapist and seeking the answer to why Evan Chan, a friend of the Salla family, was murdered.

Learning that occurs in collaborative environments while using collective states of mind, thought, and problem-solving may be what shapes the future of teaching and learning tomorrow. Jane McGonigal (2003, May) described how the networked, collective intelligence in the group known as the 'Cloudmakers' solved the immersive entertainment game of *The beast*. She noted that together the group demonstrated unequivocal capability through online social efforts. Several ARGs have in fact been developed to promote social change and awareness of our

changing world. The ARG called *World without oil* falls within this category. We shall return to this momentarily.

Current Educational Practice

Primarily, alternate reality games have been produced by industries targeting some form of sale or consumption. For example, in the case of the 'The Beast' the consumption related to the marketing of Steven Spielberg's 2001 movie release of *AI* and the *I Love Bees* ARG in 2004 was created to heighten interest in the video game release of the Xbox game *Halo II*. Other ARG experiences have been individual initiatives established by ARG fans. Ornebring (2007) observed that ARGs created by industries and individuals "share a framework of consumption that conforms to corporate goals of marketing and brand-building as well as fan audiences' goals of pleasurable interaction with fictional worlds" (Ornebring, 2007, p. 445). More recently, a third kind of alternate reality game has begun to emerge, which is a game incorporated to teach and educate an audience.

Among the formal educational implementation studies found, Gosney's (2005) explanation of his use of transmedia for an American literature course, shared the instructor's personal reasons for incorporating the game-like narrative in his university course. Below follows a review of ARGs and transmedia storytelling that have been used to educate both formally and informally.

ARG and Transmedia Storytelling for Educating an Audience

ARGs for social action and change

World without oil was a 2007 Internet experience funded by the United States Corporation for Public Broadcasting, using funds made available for 'innovative educational online games' that reached a global audience of about 2,000 players. It was designed to foster learning and thoughts about environmental sustainability and social change in a world that was facing oil shortage (McGonigal, 2010, Eklund, n.d.). Ken Eklund, an independent writer and interactive developer based in California, conceived the idea. The ARG played out over six weeks as a simulation where players would experience and ponder "what would happen if demand for oil did eventually outstrip our supply, and what we could collectively do about it" (McGonigal, 2011, p. 303). The ARG, McGonigal explained, was designed as a "massively multiplayer thought experiment" (p. 304) and tied closely to the real world with the use of social media such as video and news broadcasts, dashboards, fictional stories, etc. She further shared that the game fostered awareness through insight into what the future might bring and how, collectively, people may attempt to survive such a future. The experience, she noted, provided a "record of tremendous value for educators, policy makers, and organizations of all kinds" (p. 305) of how an oil shortage scenario might evolve in the real world.

Another informal ARG by game designer Jane McGonigal was the ARG called *Urgent: Evoke—a crash course in changing the world*. Waddington (2013) remarked how in 2010 the World Bank Institute launched this ten-week ARG to promote the institute's "vision of positive global change" (p. 42). The ARG, McGonigal (2011) explained, built on social innovation where "anyone, anywhere can start their own project or business venture to try to solve a social

problem" (p. 334). She went on to explain that the more focused aim was "to help players launch their own world-changing venture" (p. 334) and apply their learning to their local environment.

The *Urgent Evoke* ARG was playable on computers but adjusted to mobile phones, she added, which is the most ubiquitous technology in Africa and it was in Africa—ten years out—where the graphic novel narrative played out. The game, McGonigal (2011) shared, was promoted to university students in Africa as a no-cost job training; however, she noted that people from over 150 countries participated in the trial run in the spring of 2010, "making it the largest collaborative problem-solving community in Africa to date" (p. 338). *Urgent Evoke* taught lessons of social change, improvements, and money making by having players generate viable and perhaps even profitable ideas of positive change in the real world, their local world, after seeing social problems through the game designer's perspective in alternate reality. Several innovative projects, funded by seeds funds through the World Bank, emerged from this game (McGonigal, 2011). This use of ARGs suggests that they are overlays on what we call reality, helping us to understand through game and fiction how we can create change in our world. Learning is about change and; ARGs have lately been used also in formal learning environments to educate about real world problems in similar ways.

In 2011, filmmaker, transmedia designer, entrepreneur, and educator Lance Weiler set up an ARG in Park City, Utah. Having previously made several storied, real-time experiences, and games to get people together to collaborate and solve real-world problems, the *Pandemic 1.0* experience was to informally educate about fast-spreading disease. Players worked together both on site and online and "used their shared consciousness, critical thinking and problem-solving skills, and hunting ability, to quickly find information about hidden artifacts planted in Park City" (Wakefield, Mills, & Warren, 2013, p. 1611). Clues as to where to find the artifacts, such

as water bottles, were given as GPS locations, tweets, phone calls, websites, etc. (Anderson, 2011, January 14) and the artifacts had to be retrieved within a certain time frame to stop a storied impending pandemic.

The ideas of disease and fear, such as in the Pandemic, has an effect on participants as they touch on feelings. Dondlinger and Wilson (2012) wanted students enrolled in a community college capstone course to experience how they can learn, how they can educate others of real world issues, and how to make a difference in the world. In this formal problem-based learning experience, students were tasked to build an alternate reality game "that makes an impact on the United Nations Millennium Development Goals" (Dondlinger & Wilson, 2012). Students reported to the researchers that they learned through peer interactions about social responsibility, open-mindedness, and individual and personal values, suggesting that the students learned responsibilities and skills valuable for "living in a culturally and ethnically diverse world" (p. 163). Other educational ARGs have been built on such as the 'awareness' theme while others belong within the category of computer literacy.

ARGs for computer literacy and computer science

The alternate reality game called *The Door* was set inside a computer applications course where students were engaged in learning about Microsoft Office tools and technological innovations (Warren, Dondlinger, McLeod, & Bigenho, 2011). Warren et al. (2011) had students involved in a two-tiered narrative where they completed tasks for fictional clients who were disembodied Greek gods. The authors shared that by solving clues planted in both the real campus environment as well as shared over various media, students would collaborate to solve the case using, intellectual strategies to test theories and arrive at solutions. They added that during the process, students learned about computer applications and the development of

technology tools, the Internet, and the World Wide Web, and also how to use technology tools. This was meant to foster transfer between the course ARG activities and what was expected of them in the world of work.

Deficiencies identified through research conducted on the impact of the *The Door's* design were addressed in the next iteration called *Broken Window* (Warren & Najmi, 2013). Warren and Najmi (2013) noted that students had been struggling with time management and self-monitoring, among other things, and the game design had not been stimulating enough for them to connect the learning with what they had been studying, with real-life use. Therefore, as the authors noted, *Broken Window* built on communicative actions and merged problem-solving and game elements design. Students had an opportunity to use their acquired computer literacy skills to produce immersive learning-games as their final course products rather than just playing a game.

Related to the category of ARGs for action and social change, a third iteration of the computer application's course above was the transmedia storytelling mission called 'The 2015 Project: Promoting Student Discourses on UN Millennium Development Goals.' This course "centered around students' use of technology tools for communicating and understanding global problems" (Gratch, Warren, & Wakefield, 2014; Warren & Wakefield, 2016). Using two United Nations Millennium Development Goals (combating HIV/AIDS and Environmental Sustainability), students learned about the computer tools and technologies by setting their learning into a real-world context. They wrote letters, analyzed data, and shared their individual findings through presentations. The course activities made it necessary for students to engage in transmedia navigation, to seek supporting narratives to the texts they were reading, find evidence

for their own arguments or counter-arguments or support for their peers' statements, and attempt to unfold or construct possible solutions to these important global problems.

In his dissertation thesis, Hakulinen (2015) studied the use of badges and ARGs for learning computer science. Participants in the ARG *Stop Toilworn Diamond* encountered a story and compelling puzzles for players to solve, such as figuring out image mode (RGB), solving coded messages (Huffman coding), Boolean algebra, and ASCII character encoding. The puzzles were set into place to teach participants computer science concepts which had been blended into the game. These puzzle concepts included "data structures, algorithms, programming steganography, and Boolean algebra" (p. 90). Even though the game ran at the Aalto University campus, participation in this game was not restricted to the university, as the tagline 'This is not a game,' TINAG, aspect had been preserved. This aspect of the game made it difficult to determine how many actual students participated and to assess them in a formal way. In his findings, Hakulinen shared that ARG players are intrinsically motivated; however, emphasized that motivation to play and interact with characters could possibly, when an ARG was used in a formal educational setting, take up too much of a student's time. Harkulinen's findings provided support in the collected data that students perceived they learned useful computer science in the ARG. Therefore he determined, "an ARG could be used to teach computer science as an informal learning method" (p. 94) as opposed to being a formal educational experience imposed on learners. For example, ARGs could be used on a larger scale, such as in a MOOC, to teach computer science concepts more globally (Hakulinen 2015; 2013).

Another ARG that allowed learners to acquire knowledge about computer technologies and computer development over time was the *Arcane Gallery of Gadgetry* (AGOG). Over two weeks, sixty middle school students were immersed in inquiry-based learning about "the

information research process behind history and the early telecommunications of the 19th century" (Bonsignore, et al., 2013, p. 237). Bonsignore et al. (2013) noted that the students acted in several roles other than themselves within the game; they were "inventors, archivists, cryptographers, and surveyors in a secret society" (p. 237) collectively called 'JENIUS.' This group decoded data, collected historical evidence, and used technology as students completed missions in the shared participatory narrative and received badges as rewards. Once students were engaged in the story, the authors shared, they were able to interpret the encountered information in new ways. They learned to actively collaborate in the research process, trying to assemble and form a coherent storyline, a process that moved them closer to methods used by professionals in the real world. The authors concluded that their study contributed to best practices using ARGs with teens to inform other designers and educators. A compelling narrative drives both alternate reality games and transmedia storytelling, which now brings us to how ARGs and TS have been used for teaching literature literacy.

ARGs and TS for literature literacy

John Gosney wrote in his book *Beyond Reality: A Guide to Alternate Reality Games* (2005) that he became enticed by alternate reality games while listening to a radio show and as a result, he began reading about and playing these games. As a college professor, he incorporated the elements of an alternate reality game into an American literature course. In Gosney's game, students, who were studying 'the Beats' poets, took a virtual road trip following in the footsteps of their writing. As part of the game, students found "clues or [made] connections between … sites and the larger context of the course" (p. 29). Using problem-solving and critical thinking, the students worked individually and in groups while seeking these clues, solving problems, and at the end of the semester wrote a term paper as a summary of their experiences.

Chris Aviles (2014, October 16) shared on his blog how he used the ARG called '2020' with his high school sophomore English students. Aviles, an Edgar Allan Poe and gamification fan, coded messages and created puzzles incorporated into his English language arts curriculum together with a compelling narrative about a girl from the future called Sammy. (Aviles, 2014, Oct 16). This ARG, Aviles first, was launched in the 2013-2014 school year. Sammy was in danger and needed help from the students with her schoolwork. In the process of helping Sammy, students looked at messages and solved puzzles on various platforms and in the real environment. The goal of the ARG was twofold: Aviles wanted the students to come to class and to engage with and be motivated to learn the materials. Aviles reported on his blog that both students' attendance and class averages increased, and that they were more engaged and better at paying attention.

With the help of transmedia storytelling, engagement with the learning materials can be encouraged in reluctant learners according to Laura Fleming (2013). As a library media specialist and educator in New Jersey, Fleming used the digital novel *Inanimate Alice*[8] as an example for how students may immerse "in an intense and motivating learning experience" (Fleming, 2013, p. 370) that facilitates students' own literacy. *Inanimate Alice* is a transmedia novel developed by the Bradfield Company in 2005. So far, this fictional, immersive Web novel has six episodes of Alice's adventures that span across multiple media and include text, sound, images, and entry points where the readers can connect and interact with the transmedia story.

Several libraries, both public and university libraries, have also used ARGs to engage the audience in reading and immerse people in literature through the use of game-like narratives (Battles, Valerie, & Lindley, 2011; Donald, 2006; Lamb & Johnson, 2010; Nicholson, 2013; Schwartz, 2013). Battles et al. (2011), for example, created *Project Velius* at the University of

[8] inanimatealice.com

Alabama. Here, the "main goals were to provide informal information literacy instruction and highlight important library resources" (p. 114) in combination with game elements to make the experience fun. Having looked at computer literacy and literature literacy ARGs, we next take a look at how transmedia storytelling and ARGs have been used to enhance language learning.

ARGs and TS for language learning

As noted earlier, researchers have reported that using games and social media may be beneficial in particular for language learning (Borau, Ullrich, Feng, & Shen, 2009; Henderson, Huang, Grant, & Henderson, 2009; Omar, Embi, & Yunus, 2012; Young et al., 2012). Several researchers have studied how language learning can be enhanced through ARGs. For example, Connolly, Standsfield, and Hainey (2011) described the motivational impact that a largescale, multinational ARG had on secondary school students learning a second language. Students engaged in the *Tower of Babel* ARG quest, while learning language and culture by interacting with students from 17 different European countries. "The language learning focus of the ARG was provided through the situation that students had to communicate in the language they were learning in undertaking the quests" (p. 1394). Moodle, the learning management platform that held the ARG together, allowed students and their instructors to interact regularly by acting as a database for new quests. Connolly et al. (2011) noted that the ARG characters, personas, and storyline were not as rich and real as students would have expected as compared to the more advanced games these students play, such as video games. Some issues included the difficulty of prompt scoring of 300 players on a day-to-day basis and the cost of developing the ARG. There was, however, a consensus that the ARG had contributed to a collaborative, engaging, and stimulating environment where learners could share culture, language, and knowledge with each other outside of a traditional classroom. The researchers determined that the educational

possibilities of ARGs need be further explored, suggesting subjects such as "environmental sustainability, politics, and international relations where players can collaborate across different countries and have to react to changing situations that may be the result of their ideas and actions" (p. 1400) as potential educational entry points.

Also for English language learning, Rodrigues and Bidarra (2015) described their development of an educational transmedia project for Portuguese 10th graders. The authors explained that the story-world project, called *Connecting Cat* built on transmedia play and connected learning. It was designed to improve students' communication skills with a focus on "media culture, multiculturalism, linguistic diversity, and use of technology" (p. 2). Cat, the main character in the story, is a Portuguese teen presented as similar to the students playing the game. The students are active participants helping the story to unfold across media with the main story delivered over webisodes. Much like in an ARG, the students were to seek out and solve clues to help Cat, not only across media, but also in the real environment using augmented reality and by communicating over various media.

Donahoo (2013, July 22) described another language-learning ARG on his weblog. The *Dragon collective trilogy*, a joint production by Project Syntheses and the University of Melbourne's Chinese Teacher Training Center and Education Services Australia, had students work to support a character called Agent 42 to solve 'The doom of not knowing.' The ARG, as Donahoo explained, was "created to teach the foundations of the Chinese language." It sought to have students engage and immerse more deeply in learning Chinese outside of the classroom, thereby also spending more time on the important Asian language foundations. The ARG was played out in three parts during which the middle school students learned about the sounds of language, Chinese culture and history, and how the language is written, and how to decode

characters. The learners used both digital portals and their physical near environment searching for hidden clues. Donahoo found that the students "know that this is a game…[but] they happily buy into the collaborative storytelling experience."

ARGs for freshman orientation

Alternate reality games are immersive, complex, and require team effort. In a case study, Piatt (2009) shared how an orientation ARG had been developed for incoming college students at the University of Brighton to allow them to learn more about life at the university and to get to know each other. The author informed them that all incoming students (approximately 5,000), who received 6 or higher out of 10 on an initial quiz (217 students) were invited to participate, and an additional 68 interested students became part of the game called *Who is Herring Hale?* that lasted for nine weeks. The game took place online over a learning management system (LMS) and, included clues planted in the local environment such as inside a library book available as a desk loan, and also during community events. Students who completed the short tasks, designed to take no more than 30 minutes per week, scored points on a community area called Elgg. This was set up specifically for students to communicate with each other and solve the tasks together. Small prizes were shared with winners throughout the game and larger prizes were given to 12 students who completed all nine tasks (Piatt, 2009). Although the game attracted only a small number of players, with 42 students completing at least one task, based on interviews with eight of the players completing all nine tasks, Piatt felt that the game provided students something special to be part of and an opportunity to spend more time to learn about campus resources.

Nicola Whitton (2009) has been involved with several ARGs and wrote her dissertation on the topic of collaborative computer game-based learning in higher education in 2007.[9] The 2008 *ARGOSI* game at Manchester Metropolitan University in the United Kingdom provided incoming university students an "alternative to student induction" (p. 4). Using an ARG as support, 173 participating students were provided opportunities to make new friends, find their way around the city, and "learn basic information literacy skills" (p. 4). The game, which played out in the fall semester of 2008, was not mandated and Whitton noted that the sign-up rate was lower than expected; however, the majority of the game goals were achieved. The game was funded by JISC, a British charity organization supporting digital technology initiatives in the UK, and the goals toward the funder included developing a training course for others interested in running a similar induction ARG by creating a manual, framework, and bank of challenges explicating the difficulties with designing such a game.[10]

The first freshman 'learning' ARGs appeared in the UK in the late 2000's; however, several such innovative freshman experiences targeting learning were soon tried out in the United States. For instance, in the spring of 2010 the University of North Carolina at Chapel Hill ran their first ARG. Evans, Christopherson, Sturm, King, and Haefele (2010) presented their design and offered suggestions for "creating marketing, and running an educational ARG" at the SIGUCCS conference that same fall. Their ARG was a two-week experience for students to follow along in a narrative to target difficulties undergraduate students may experience as new couples when first start dating. The experience, *Should Brandon and Nicole Get Engaged* (ShBANGE), was explained as two "students from different backgrounds started dating as first-year students and are in their senior year during the game" (Evans, et al. 2010, p. 158). It

[9] www.playthinklearn.net
[10] These deliverables are available on the argosi.playthinklearn.net website.

included seventeen puzzles for players to solve. These puzzles "were designed to include as many areas of the academic curriculum as possible…as well as popular culture" leading players to research and explore curricular content, campus services (such as the counseling office and library), as well as technology tools that may have been new to players (Evans, et al., p.159).

The time it takes to learn ARGs tends to vary. While Evans and colleagues shared design considerations during the development of their two-week ARG, a 15-week long freshman experience called *Reality Ends Here* was envisioned and was introduced at the University of Southern California Cinema School in 2012. Tracy Fullerton, a member of the university committee to envision it as a "gateway experience," shared on the university website that it would introduce students "to the changing media landscape, the history and future of the School, the possibilities that can emerge from the SCA network of current and past students and the importance of bridging the divisions of the school while they are here, both socially and academically" (USC, January 13). At the time a Ph.D. candidate, Jeff Watson, MFA student Simon Wiscombe, and Fullerton designed the ARG layer of the experience. This ARG played out as a competition throughout their first semester during which students created interesting media projects using game cards, and students with the most points on a leaderboard each week were rewarded with a special prize (USC, January 13). Other educational ARGs have been developed such as within teacher education.

ARGs and close to ARGs for other educational contexts

The STEM ARG was developed by Bellocchi (2012). It was created as a nine-week ARG for pre-service science teachers with the goal to have the students critically think about the futuristic scenario of a possible STEM crisis where skills to solve problems with food production had decreased within the population. (p. 44). Yet another ARG, was to teach students enrolled in

a college health courses about health issues that may occur due to inactivity (Johnson, Massey, and Marker-Hoffman, 2012; Sheldon, 2009). In particular, Johnson, Massey, and Marker-Hoffman noted, college students who leave their families for the first time, lose the parental support, and take on high course loads, are in danger of acquiring health issues by staying minimally active. The ARG called *Skeleton Chase* examined "whether a game intervention could positively influence PA [physical activity] and weight gain with the college-aged population" (p. 835). The controlled study had 63 students in one game section of a health science course compared to 108 students in two lecture/lab sections. Game elements included puzzles and challenges located on websites, blogs, video, phone calls, and text messages, but also live performances by actors—all connected to the story about the "kidnapped Professor Sarah Chase and her former teaching assistant, Sam Clemens" (p. 830). According to the authors, the game influenced students in the game group to engage more in physical activity, such as walking while the compare group decreased their physical activity.

The fact that transmedia storytelling and alternate reality games are interesting for educational purposes was further strengthened when Pearson Research & Innovation Network Center for eLearning launched a large scale Alternate Reality Learning Environment (ARLE) in 2014 (Wardlow, 2015, January 26). The topic for the ARG was a pandemic, which shows that this type of subject is re-usable. Lance Weiler tried this in his Park City ARG called *Pandemic*, in 2011. Guided by their instructors, high school and college students from both the United States and abroad worked together in the ARLE to solve the problem of an imminent pandemic over a six-week period following the transmedia narrative created by game experts working for Pearson. Students participated while learning a variety of subjects including science in the form of biologists, English language arts, ethics, business, political science, and communications in

their regular classroom (Wardlow, 2015, January 26). Another type of large-scale game that requires collaboration is massively multiplayer online games, which are also relevant to this discussion.

One massively multiplayer online role playing game (MMORPG) that has found its way into learning is *World of Warcraft*. The use of these types of games in learning is supported through their contributions to team building and collaboration toward a common goal. Lee, Eustace, Fellows, Bytheway, and Irving (2005), for example, shared from their stage, one of a MMORPG project, how high school students in English and computer science were part of both the design process and the game play. The researchers concluded that the process was challenging but contributed to both collaborative efforts and problem-solving opportunities.

There are some similarities between alternate reality games (ARGs) and MMORPG as they both require simultaneous play with a large number of other engaged people, active collaboration, and leadership. ARGs are differentiated by residing on the verge between reality and virtuality and focus more on an overall collaborative approach to learning and interaction. MMORPGs also emphasize collaboration; for example, as in synergy with competition, when players try to beat the game (Gee, 2008).

Games involve engagement and interaction with the game. In games, Norman (1993) noted, players have to use "experimental and reflective cognition" (p. 22). The reflective mode is used to unravel clues or secrets and develop successful strategies. The experimental mode is to enjoy the game state and react at a skill level that allows the player to move the game forward. Today games often involve technologies and are designed for learning that may be enticing and interesting for students to play.

Chapter Summary

This chapter allowed the reader insight into the background of storytelling, games, alternate reality games, and transmedia storytelling. The history of learning with stories dates back to the beginning of humankind and the literature review sought to place the reader in this context and further segue him into where classroom learning is today regarding the use of story and game elements within alternate reality games (ARG) and transmedia storytelling (TS). The review showed that there are few documented formal learning implementations; only one expanded on a lived experience shared by the course instructor. A gap in the literature may thus be said to exist.

CHAPTER 3 - METHODOLOGY, METHOD, AND THEORETICAL FRAMEWORK

Introduction

The purpose of this dissertation was to study lived experiences of co-researchers to arrive at the essence of what it is to use alternate reality games (ARG) or transmedia storytelling (TS) for learning. The qualitative, conceptual methodology of phenomenology, with a peer review, was used for inquiry and to support the study, and transcripts of the interviews—the narratives of the co-researchers who participated—provided the data. This chapter begins with a brief summary of the findings from the literature review (Chapter 2), and then introduces research goals and the contribution this research attempts to share with the field. This is followed by a description of the philosophical foundations of Edmund Husserl (1859-1938), the founder of phenomenology and the method used as a research framework. Data collection, research method, research questions, and research ethics conclude this chapter.

Research Summary

In an attempt to make the learning more real to students, many instructors have experimented with incorporating technology, such as computers, video, digital discussion boards, and simulations, into their classroom learning environments. Authentic learning environments or authentic tasks, i.e., tasks situated in the real world as opposed to the classroom only, are often referred to in situated cognition/situated learning, cognitive apprenticeship, and problem-based learning. Such authentic learning, as seen by many researchers, has been found to provide better transfer of learning (Brown, Collins, & Duguid, 1989; Driscoll, 2000; Herrington, Reeves, & Oliver, 2007; Jonassen, 2011; Lave & Wenger, 1991; Snowman & McCown, 2015; Woolfolk, 2008). Further, students engaged in authentic experiences often see the learning as more

meaningful and interesting (Woolfolk, 2008). Within the broader field of technology-enhanced learning, a small but increasing number of alternate reality games and transmedia storytelling experiences have found their way into learning environments via designers and instructors experimenting with story and game elements for enhanced learner experiences. Examples of ARGs included in the previous chapter were from a computer applications course, freshman year experiences, a capstone course for college students, an English language course, and an American literature course. Only one of these, Gosney's (2005) American literature course, included some shared lived experiences as to what it is for him to include such game elements for students in the course design. A gap in the literature therefore exists within this area of learning enhancement through story and game element implementations as such lived educator experiences have not been documented. Inquiry into lived experience falls within the phenomenological methodology, which guided this study.

Research Goal and Contribution

The goal of this research was to explore the lived experiences of instructional designers and instructors who have used or designed with the game-like transmedia narratives of ARGs and TS in learning. Exploring the intentionality and essence of their experiences will help us understand how to innovate with new designs, techniques, and technology for learning. Further, it will suggest to us, for or against, the use of these game-like narratives in our field of instructional design. At the onset of this study, few designers and instructors were documented in their use of ARGs and TS for learning, allowing this research study contribute to the general knowledge base.

Methodology and Theoretical Framework

Edmund Husserl (born 1859), provides the original research methodology of phenomenology used in this study. Three additional contemporary 20th and 21st century philosophers—Alasdair MacIntyre (born 1929), Jürgen Habermas (born 1929), and Scott Warren (born 1974)—lend additional support for this research study in their theories. Each of these philosophers' theories are briefly explained, beginning with MacIntyre's theory of rationality within a tradition. Thereafter, Husserl's phenomenology is introduced.

Rationality within a Tradition

Alasdair MacIntyre

Alasdair MacIntyre is a contemporary ethicist who argues that reason and rationality can only function contextualized within a tradition. For MacIntyre, humans reach reason and intelligibility through narratives shared by culture, environment, and tradition. MacIntyre (2012) said that tradition "is sustained and advanced by its own internal arguments and conflicts" (p. 260). We enter society, as MacIntyre (2012) wrote, as characters with roles among other players with roles. We have to learn, he continued, not just our own role but other people's roles so that we may understand each other and respond appropriately. MacIntyre expressed that we, in fact, cannot understand "any society, including our own, except through the stock of stories which constitute its initial dramatic resources" (p. 216), thoroughly underscoring the importance of history, narrative, culture, and tradition.

MacIntyre (1988; 2012) believed that rational discourse within a tradition provides certain constraints and resources to the participants within that tradition. Constraints come from,

for example, the texts that are read within the culture (MacIntyre, 2012) and what Bakhtin called the 'already-spokens', i.e., "previous utterances about the topic" (Morson & Emerson, 1990, p. 137). Not knowing the already-spokens serves to remind us that we cannot enter a dialog or take action within a tradition about which we know little or nothing about. We have to live and learn within the tradition to come to understand it. To inform people of what they do and what values they should hold, Devine (2013) said, "Traditions in the relevant sense involve claims to truth, but they also must inform the lives of their adherents" (p. 110).

Following the ideas of Thomas Kuhn's "paradigms concept", MacIntyre (2012) formulated the idea that entering into a practice means moving into a bond with the other practitioners of that practice; specifically, to learn from both current and past members to become part of their story. It is, he wrote, "always within some particular community with its own specific institutional forms that we learn or fail to learn to exercise the virtues" (MacIntyre, 2012, p. 194-195).

As an example, consider today's multicultural America. It is like a New Orleans dish of gumbo. People of various nationalities have come together into one nation. Each nationality brings their specific cultures—their way of looking at the world, their beliefs, perceptions, habits, and flavors. Though the gumbo is just one dish, one can still taste individual ingredients and their distinct flavors. Likewise, each nationality has a culture with its own history and its stories told by their people. Investigating tradition helps us to understand history, the past of other cultures and groups of people, and these stories provide to us our mode of access by "making the past available to the present" (Gadamer, 2013, p. 202).

MacIntyre believed that reason and rationality emerge through conceivable reasons and shared constrains within a tradition. For example, sharing within a tradition can take place

through books that contain the history and specifics of the culture. Traditions, according to MacIntyre, are not monolithic. Within a tradition, many different thoughts and discussions take place that shape the tradition. As an example, we look to the field of instructional design.

Instructional design is a formal, pragmatic[11] practice within a tradition that started around the Second World War. At the time, there was an urgent need for effective, efficient, and engaging instruction, and a driving need to educate many people quickly and thoroughly. Within the instructional design tradition, strategies and models developed for how to best design instruction. Today, these same strategies are shared with newcomers within our field of instructional design through books and journal articles written by the big names within the field—practitioners and researchers who have verified methods that produce expected learning outcomes when designing instruction. These methods are also shared through stories such as practitioner descriptions of successful implementations at conferences and through webinars. There is no monolithism within this tradition as not everyone agrees that any one approach is the best to use. Instead, there are a variety of principles and methods available, such as Gagne's Nine Events of Instructions, the ADDIE Model, Backwards Design, and the Dick and Carey Model, to mention a few. These models and principles are shared with new practitioners in the field of instructional design and further with instructors to initially simplify design of instructions through a step-by-step process. Instructional design models are tools to aid the designer of instructions into finding or constructing learning activities for situations.

Opening the door, listening in on the thoughts and discussions that shape the tradition within which instructional designers and instructors engage in ARGs and transmedia storytelling for learning, this research study sought to get to the essence of the experience of these co-researchers.

[11] See operational definitions, Chapter 1.

Theory of Communicative Actions

Jürgen Habermas

Habermas' concept of communicative rationality borrows pragmatic resources from George Mead (Cahoone, 2014). Mead argued that development of self grew out of communication and socialization with others (Habermas, 1987). In Habermas' communicative rationality, the society is made up of system and lifeworld, where the system is the overarching governmental and judicial part of the social world—the powerful system that dictates rules for the people. These top-down norms are strategically communicated regulations that cannot be easily opposed. Strategic communicative actions work similar to bargaining where one party, the speaker, is primarily interested in pursuing his or her own goals. The speaker wants the actor, the other party, to do something, e.g., behave in a specific way, or the speaker wants to strongly influence the other party; and there are consequences if the actor does not follow along (Cahoone, 2014; Habermas 1984). Alternatively, the lifeworld is where the communicative rationality emerges between citizens engaged in reaching understanding and agreements among speakers through successful communication. In this setting, speech is tested for sincerity and appropriateness and validity claims are tested for effectiveness, truth, rightness, and truthfulness (Habermas, 1998). Habermas' theory holds that these norms are embedded in actors' speech acts. The communicative acts within the lifeworld, he says, "serve the transmission of culturally stored knowledge" (p. 63) and for sharing norms appropriate within the milieu (Habermas, 1987).

Learning and Teaching as Communicative Actions

Scott Warren

Warren developed Habermas' theory of communicative actions into a theory for reason and rationality within educational systems. He calls this theory, which was conceived in 2008 together with Richard Stein and further expanded by Warren, Bohannon, and Alajmi in 2010, and by Wakefield, Warren, and Alsobrook in 2011, "learning and teaching as communicative actions" (LTCA). At its core, LTCA theory "seeks to improve human communication toward instructional and learning goals" (Wakefield, Warren, & Alsobrook, 2011, p. 416).

LTCA theory builds on Habermas' theory of communicative actions and holds five communicative acts: normative, strategic, constative, dramaturgical, and more recently, affective communicative actions. The alternate reality game *Broken Window* (Warren & Najmi, 2013), was built around the four first mentioned communicative actions to support student learning. In concert, all five of these actions "guide the learner and instructor toward reaching and improving understanding through effective communicative actions" (Warren, Bohannon, & Alajmi, 2010, as cited in Wakefield et al., 2011, p. 417) to arrive at reason and rationality.

Strategic communicative acts are directives shared by the instructor and are based on school, state, and national guidelines. For example, they may include ethical principles by which all shall abide. In K-12 learning this may include students being seated quietly in the classroom when the bell rings, waiting for the instructor with their binders and books on the floor under their desks. It may include learning about Lavosier's law of conservation of mass in sixth grade as a basis for other science learning throughout an American student's time in public school. Strategic communicative acts are non-negotiable.

Normative communicative acts are also ethical ones; however, they may be negotiable. In a college example, students may negotiate with their instructor about having class time outside instead of inside due to the nice weather or to design a game instead of a transmedia story for their final course assignment. Or, the sixth grade instructor may ask the students to decide if they prefer to learn about plant processes before they learn about properties and changes of matter. This would allow the learners a sense of agency and buy-in to the learning with the help of choice.

Constative communicative acts serve to improve understanding among peers and the instructor in a collaborative way and to engage in solving problems by shared means. This is a construction of truth claims that are challenged by other communicators. It allows for truth to be validated rather than be singular statements and for knowledge to become collective within the group or within a tradition. For example, a student may say that Lubbock is located in south Texas. Another student may correct the first student by saying "are you sure?" After checking with the instructor, in a geography book, or on the Internet, the students arrive at the understanding that Lubbock is located in Texas, however, in the northeast rather than the south.

Dramaturgical communicative acts serve as an outlet for students to express their internal lifeworld in creative ways through poetry, blogs, notes, artwork, game design, storytelling, etc. By presenting their creative work, peers and instructor may provide mindful critiques of this work; further contributing to the student's learning experience. For example, students in 10th grade may be asked to read a literary work by a poet about a journey across the American continent. Students would then use their imagination and creativity to freely visualize their understanding through a piece of art. One student may opt to use a canvas, and scrapbook paper to cut out the continent, markers to make stopping points and add text along the outlined route,

and glue on 3D artifacts such as a toy car, a toy train, and a refrigerator magnet from Las Vegas to the artwork to show mode of travel and places visited. In class, students may view each other's work and make comments and suggestions to each other, i.e., share informal feedback, allowing for improvements in future projects.

Affective communicative actions include staying attentive to learners and supporting their psychological and emotional development, especially in K-12 as children develop to teens and young adults. Affective actions involve care statements, showing students that we, as instructors care for their learning and development. Students' affective communicative actions may also include peer-learning or peer mentoring—helping a fellow student.

Alternate reality games and transmedia storytelling are delivered over various platforms, including social media. As such, the LTCA theory provides a valuable framework for assisting students "by encouraging learning through those social media interactions that many students employ for interpersonal communication by engaging them in social discourses that allow shared meaning making and expression of personal identity" (Wakefield, Warren & Alsobrook, 2011 p. 581). LTCA theory with its communicative actions not only provides support for interaction with content and idea sharing but also allows for critical reflection and creative self-expressions leading to building personal agency. It is a theory for both teachers and learners.

Theories by MacIntyre, Habermas, and Warren advocate communication as a critical component of human development. MacIntyre explains how communication takes place within traditions; Warren expands on Habermas' theory to illustrate how the communicative acts distribute various meanings and messages within educational settings. Within the tradition of working with ARGs and transmedia storytelling to educate, we find the instructors and instructional designers who are part of this research study.

Husserl's Phenomenology

Background to phenomenology

Polkinghorne (1989) noted that research methods are "outlines of investigative journeys, laying out previously developed paths, which, if followed by researchers, are supposed to lead to valid knowledge" (p. 41). Our investigations in the past 300 years [in Western science], he noted, have been based on the thesis of the natural standpoint—the understanding that

> …reality consists of natural objects and that knowledge is a description of these objects as they exist in themselves…[with the purpose] to eliminate the distorting influence of personal perspective and the subjective properties of researchers. (Polkinghorne, 1989, p. 41)

Edmund Husserl is known as the father of phenomenology which he developed around the turn of the 20th century. This approach looks at human awareness and experience—what gives itself—as the foundation for natural objects, namely "memory, imagination, and feeling" (Polkinghorne, 1989, p. 41). It stands out as the firm foundation for all other science and knowledge—"the science of the origin of all things" (Cahoone, 1988, p. 102). Phenomenology allows the researcher to "peer through the screen of individuals' lives and understand the meanings of what they do and perhaps more importantly, why they do it" (Rogers, 2012, p. 59).

Psychologism

After completing his doctorate in mathematics in Vienna, Husserl was inspired by lectures of the psychologist and philosopher Franz Brentano. However, Husserl soon wanted to move away from the thinking of philosophers such as John Stuart Mills, and Franz Brentano, and neurologist Sigmund Freud, who supported what they called psychologism (Cahoone, 2010). Sokolowski (2000) described psychologism as "the claim that things like logic, truth,

verification, evidence, and reasoning are simply empirical activities of our psyche. In psychologism, reason and truth are naturalized" (p.114). Sokolowski went on to explain that in psychologism "laws of truth and logic are taken to be high-level empirical laws that describe how our minds function; they are not seen as constituents of the very meaning of truth and reason" (p. 114). Husserl felt that one must be able to explain how things appear, i.e., how they present themselves in "a domain of rationality… that goes beyond the psychological" (Solokowski, 2000, p. 115), and he went on to develop his own phenomenology, which he called, transcendental phenomenology.

Phenomenology is a theory about the structure of subjectivity, which also explores how we comprehend and view the world (Zahavi, 2003). Husserl sought to remove from inquiry that connotations or conceptions could be psychologistic or naturalistic constructions (Cahoone, 2010). He noted in the first chapter, second section of *Ideas*, how "our first outlook upon life is that of natural human being, imaging, judging, feeling, and willing, 'from the natural standpoint'" (Husserl, 1962, p. 91). He did not reject the thesis of the natural standpoint; however, he asked that the phenomenological researcher set the belief of the thesis of the natural standpoint aside while engaging in phenomenology (Cahoone, 2010). In Husserl's phenomenology, meaning is constructed in consciousness and form an untainted, pure field of evidence (Cahoone, 2010). Moustakas (1994) noted that this pure evidence leads "to knowledge in the absolute sense… [and derives from] a person who is open to see what is, just as is, and to explicate what is in its own terms" (p. 40).

The phenomenological investigation is a journey taken by a researcher curious to learn from an individual firsthand. Phenomenology, with an added layer of peer review described further down, guided this study of personal experiences of instructional designers and instructors

who have designed or implemented alternate reality games and/or transmedia storytelling for learning or teaching. Phenomenology requires the researcher to employ

> …disciplined and systematic efforts to set aside prejudgments regarding the phenomenon being investigated … to launch the study as far as possible free of preconceptions, beliefs, and knowledge of the phenomenon from prior experience and the phenomenon investigated. (Moustakas, 1994, p. 22)

This investigation begins with the *epoché*, the process of bracketing, allowing the researcher to search for the purest possible essence that will help us understand the phenomenon.

Phenomenology analysis involves wonder and curiosity on the part of the researcher toward lived experiences and the researcher's exploration and questioning toward grasping "exclusively singular aspects (identity/essence/otherness) of a phenomenon or event" (van Manen, 2014, p. 27). As the researcher, it was my intent to use phenomenology in this study of lived experiences by instructional designers and instructors to gain insight into the culture of teaching, both formally and informally, with alternate reality games and transmedia storytelling. The main research question, driven by my curiosity, was "What is teaching with alternate reality games and transmedia storytelling for instructors and instructional designers and how does this reveal itself?"

The Role of the Researcher

As a researcher, first and foremost, I conformed to ethical principles of research, noted in the ethical considerations section of this chapter. I completed all preparatory work prior to conducting the study. This work included, but was not limited to, preparing interview questions and ensuring they were valid and appropriate by finding a minimum of three experts to review

them. I filled out the appropriate paperwork and asked my dissertation chair to submit it to the University of North Texas Institutional Review Board for approval and I did not start data collection until approval was given. Further, and before my study, I wrote a subjectivity statement which is presented in Appendix A and is common practice in qualitative research. During the study, I also kept a logbook, as is another recommended qualitative researchers practice and functions as a form of data collection in a reflexive research process (Ravitch & Mittenfelner, 2016). This allowed for recording my own lived experience throughout the research study.

Method

For this study I used phenomenology as introduced by Husserl (1962; 1970). I also used ideas from those who built upon Husserl's phenomenology, as they were further developed into research frameworks by Creswell (2013), Moustakas (1994), and van Manen (1990; 2014). Additionally, I used ideas shared by van Kaam (1966) for the peer review process and ideas by Colaizzi (1978) for member-checking. Phenomenology takes a fresh look at phenomena through a process of bracketing and reduction. The researcher performs the *epoché*, engages in horizontalization, imaginary variation, and synthesis to arrive at and "convey an overall *essence* of the experience" (Creswell, 2013, p. 80). These steps are explained below, starting with *epoché*.

Epoché

Husserl's method to reach the *eidos*,[12] the sheer essence and evidence in consciousness, is through *epoché*. Epoché is a Greek word loosely translated as bracketing. When a phenomenologist begins his investigation, he brackets the thesis of the natural standpoint. He

[12] Eidos - a Greek word for form or Idea (as in Plato), aka essence.

sets aside the idea imposed upon us by the physical sciences that experience, all our purposeful acts, and all objects, happen inside a physical world which then generates the experience we are having (Cahoone, 2010). Setting this concept aside, prejudgments and suppositions regarding the phenomenon, allows the phenomenologist to conduct inquiry into "the condition of the possibility for experience, meaning, and manifestation, and thereby also the framework within which all other sciences take place" (Zahavi, 2003, p. 66). The result is a study of freshness and uniqueness of the essence of an experience.

Moustakas (1994) noted the potential of a researcher being biased in the role as an investigator and Van Manen (1990) believed that a researcher cannot separate him or herself from the phenomena under study and is thereby naturally prone to bias. Van Manen felt that it is in the interest of the researcher to take on the study and immerse herself in the data, and, as such, bias is naturally present. Husserl (1995), however, used *epoché,* which is the bracketing of the natural standpoint. The eidetic reduction then allows the researcher to proceed toward the essence of the experience.

Eidetic reduction

The first step of the eidetic reduction is where the researcher brackets the research question and, best as she can, everything idiosyncratic and unique to him or herself. This includes one's own experiences, thoughts, and bias and takes place prior to looking at the lived experience—prior to gathering data. This uses a reflective method so that only the co-researcher's lived experiences are observed and documented in keeping with Schutz (1967) advice that using this technique of separation of the researcher from the phenomenon builds credibility.

However, as noted by Colaizzi (1978), a researcher "can never achieve a state of absolute disinterest, and…objectivity does not mean disinterest, for without some personal interest he could never follow through in completing or even initiating a research project" (p. 55). Therefore, as the researcher, I took note, as best as I could, of my preconceived thoughts and knowledge about alternate reality games (ARG) and transmedia storytelling and what I may already know of what it is to instructional designers and instructors to teach with these game-like narratives. I set aside my own impressions from having incorporated a transmedia storytelling curriculum with ARG components into a college course.[13] I took a fresh look at the phenomenon from each co-researcher's view. In my personal opinion, I find these digital constructs attractive and appealing and am interested and curious to learn more about them from others.

As I began my bracketing, I recognized that I am not immersed in these games as some people are. I have not completed playing an ARG, but as mentioned above, I have built a small pilot game for students and also contributed to designing, building, and implementing other transmedia experiences. I am curious about these new multimedia game environments and this led me to undertake this study. I wanted to get to the essence of what it is to instructional designers and instructors to teach using game-like narratives. As a newcomer within the tradition of educators using narratives to educate, I am at a point where I am able to bracket preconceived thoughts so not to be overly biased in my research. To further minimize and avoid bias, I incorporated peer review in the data analysis phase as suggested by van Kaam in 1966 (Beck, Keddy, & Cohen, 1994). I shall return to the peer review later in this chapter, in the discussion of methodological rigor.

[13] I had done so as a newcomer within this tradition, and to learn more about this culture.

Horizontalization

Gadamer (2013) explained horizon as "the range of vision that includes everything that can be seen from a particular vantage point. Applying this to the thinking mind, we speak of narrowness of horizon, of the possible expansion of horizon, of the opening up of new horizons" (p. 313). He went on to explain that the word horizontalization characterizes:

> The way thought is tied to its finite determinacy, and the way one's range of vision is gradually expanded. A person who has no horizon does not see far enough and hence over-values what is nearest to him. On the other hand, to 'have a horizon' means not being limited to what is nearby but being able to see beyond it (p. 313).

The use of horizontalization in this study will be explained further down.

Imaginary Variation

According to Moustakas (1994), the imaginary variation "is to seek possible meanings through the utilization of imagination, varying the frames of reference, employing polarities and reversals, and approaching the phenomenon from divergent perspectives, different positions, roles, or functions" (pp. 97-98). This includes finding meanings and perspectives in the textural data—in this study the data consisted of the transcribed interviews.

Synthesis—Essence

Van Manen (2014) explained that the eidetic reduction is the synthesis and describes the eidos—the form or idea—"the internal meaning structures, of lived experience. A universal or essence may only be intuited or grasped through a study of the particulars or instances as they are encountered in lived experience" (p. 229). The reduction leads to a synthesis of findings, the very essence, from the individual structural and composite structural descriptions.

Setting

The setting for the research study was both synchronous and asynchronous temporal settings. I anticipated interviewing co-researchers in person in public, participant-selected spaces at AERA, a storytelling conference, EdMedia, ARGFest, and/or synchronously over Adobe Connect Pro. I had further anticipated to interview co-researchers over email as needed (written protocols). Van Manen (1990) noted that "most people find writing difficult" (p. 64); however, if this was the preferred means of communication for a co-researcher, I had planned to use this means so as not to exclude him or her from participation. Written protocols would also have allowed participation if there had been scheduling issues. Van Manen (1990) noted that writing forces the author to share from a reflective perspective and may add certain constraints to the expression in comparison to face-to-face interviews. He further noted that stories, novels, poetry, and autobiographies are often used as additional sources for phenomenological studies. Even though the above-mentioned different methods for interviewing were made available, all 11 interviews took place as synchronous interviews over Adobe Connect Pro.

Co-researchers

With a limited number of co-researchers, overwhelming amounts of data should be avoided. Moustakas (1994) noted that even a small number of participants—as few as one—is acceptable in phenomenological studies. Creswell (2013), however, suggested that phenomenological studies include 5-25 individuals (p. 81). Moustakas and Creswell additionally shared some fundamental points when it came to the number of participants, mainly that all co-researchers need to have "experienced the phenomena being explored and can articulate their lived experience" (Creswell, 2013, p. 150), and that the essence may emerge through the analysis (Moustakas, 1994). Given these guidelines, a small number of potential participants were

initially invited to the study. I contacted educators identified as instructors who had or were using, or had designed ARGs and/or TS for learning or teaching through a review of the research literature and conference presentations.

To frame the study, a purposeful selection of co-researchers was conducted. Several instructional designers and potential educators were initially identified to ensure that there was at least the minimum number of eight co-researchers to make the study possible. Other potential co-researchers were identified using snowball sampling. After interviewing a known designer or educator, the researcher asked the interviewee about others who may also have designed with or used ARGs or TS for learning. The snowball sampling continued throughout the interview phase until enough co-researchers had been interviewed. For this study, I anticipated I would interview 8-11 participants; however, snowball sampling allowed me to conduct 11 interviews.

Co-researcher selection criteria specifics

The names of more than 42 possible interviewees were originally gathered. These educators had all been engaged in either (or both) alternate reality games or transmedia storytelling in learning. The names were gathered through a review of the literature including journal articles, book chapters, books, Internet blogs, websites, articles, as well as by word of mouth.

The following selection criteria for invitation of participants were used:

1. Participants were American or European instructional designers or instructors who had designed or used ARGs and/or TS for learning or teaching purposes. Excluded from interviews were those who only incorporate the techniques of ARG and TS for teaching and learning about marketing. That is to say, the educational use had to be related to some learning other than marketing through media.

2. The participants were willing to sign a consent form to participate in the research study and to allow the researcher to interview, transcribe, read, and publish all parts of the shared lived experiences related to the phenomenon.

The purposeful sample included 8-11 participants from various locations in the United States and Europe and with a diversity of experiences, backgrounds, beliefs, and perceptions. With this group, it allowed the extraction of the essence of the phenomena and to answer the overarching research question to gain insight into the culture of teaching with game-like narratives. The eleven co-researchers who agreed to participate were, in alphabetical order by last name:

- Chris Aviles
- Rebecca Brown (pseudonym)
- Matthew Crosslin
- Daniel Curry-Corcoran
- Ken Eklund
- John Gosney
- Karine Halpern
- Patrick O'Shea
- Scott Warren
- Jeff Watson
- Lance Weiler

Research question

The main research question for this study was:

- What is teaching with alternate reality games and transmedia storytelling for instructors and instructional designers and how does this reveal itself?

Additional research questions were:

- What is it that makes the cross-media learning experience different from traditional pedagogical pursuits?
- What are the learning theories/strategies that guide alternate reality games and transmedia storytelling experiences?
- How does alternate reality games and/or transmedia content creation fit into the delivery of curriculum? How does student engagement with the content delivered over various media and platforms play into the classroom learning and the overall learning environment?

Data Collection

Trustworthiness and rapport

Validation is important in qualitative inquiry. I ensured that authenticity was maintained by gathering data from several sources. This included interviews with participants from various places in the United States and in Europe. Gathering data from interviews of various participants in different locations who shared their experiences and work on syllabi and websites, and using peer review in the analysis were two ways to establish trustworthiness. The main data gathering process was through interviews.

The phenomenology research method used here involved an atmosphere and sensitivity between the researcher and the participants of mutual understanding and trust (Moustakas, 1994). To accomplish this trust, I first contacted the potential participants over email (or LinkedIn and then email) to introduce myself and explain the reason for writing. In my email narrative (Appendix C), I explained the research project, my choice of methodology, and how I would

value their participation as co-researchers in my study. In a qualitative study, such as this phenomenology study, it was important that the participants be involved and engaged, have an interest of their own in the topic, and were interested at the 'equal footing' level to participate as co-researchers.

Interviews

All interviewees chose to participate in interviews over Adobe Connect. Invitations to interview were sent to known subjects over email or via the professional network LinkedIn. When the subject accepted the invitation to interview, a link was sent to him or her to follow and approve participation on a consent form that resided on UNT's *Qualtrics* survey platform. The researcher set up an appointment time focusing on the participant's availability and sent an invitation and a meeting link. At the time of the meeting, the interview was recorded using the Adobe Connect interface, which allowed the subject to visually see the interviewer and for her to see the interviewee if he or she chose to use video during the interview. While recording, the Adobe Connect user interface showed a red indicator light alerting participants of the ongoing recording.

Time was spent on making the participant feel comfortable prior to starting the interview. This included some initial chatting while setting up the Web camera if the participant so preferred and some warm-up questions. The participant was then asked open-ended interview questions (Appendix B). This technique allowed me, as the researcher, to ask follow-up questions as needed to clarify answers. I had estimated that interviews would last approximately 30-60 minutes or until the topic had been exhausted; however, interviews ranged between 40 and 85 minutes. At the end of the interview, I asked the interviewee for possible names of others they knew who might be interested in participating in the study. I then thanked the participant for his

or her time, invited him or her to become a co-researcher, and then stopped the recording. After the interview, the FLV file was downloaded to the researcher's computer, transcribed, and returned to the co-researcher (see further data treatment below).

A second round of interviews was conducted after the participant had received and reviewed the transcript for review so that they would have an opportunity as a co-researcher to add to the data set anything that had been omitted in the first round or correct where unintentional utterances had been captured. This second interview round took place over email. The use of two interview rounds uncovered the participant's lived experience with regard to ARGs and/or TS and gave the co-researcher opportunity to share any other related information he or she believed was valuable to include and that had been excluded from the first interview.

The second interview phase was also iterative until saturation had been reached. In this phase additional questions that had emerged were discussed. It was anticipated the co-researcher's total time would take one to two hours should they participate. Co-researchers were encouraged to participate as much as they wanted but with no pressure should they prefer not to contribute anything in addition to the completed interview.

Data Analysis

Data treatment

After each Adobe Connect Pro interview, I downloaded the interview FLV file and converted it into an MP4 file, using the *Handbrake* software. The MP4 file was then imported into *Adobe Premiere* where it was converted to an MP3 file, excluding the video, making the file an audio-only file format in preparation for transcription using the free version of Transcribe Express software. The Transcribe Express software was then synched with an attached foot

pedal, which allowed for transcription in manageable chunks of audio for typing, using a keyboard for input into text in a Microsoft Word™ template.

I transcribed seven recordings, and was assisted by a recently graduated Master's student who transcribed the four remaining interviews. This graduate student had engaged in interviews of lived experiences for her own thesis and had used the same transcription software. She also contributed a professional transcription Word template which was used for all interviews before sending out the transcripts to the co-researchers for member-checking and she was one of the two peer reviewers in this study. The written textural transcripts provided the data in this research study.

Data analysis procedure

Moustakas (as cited in Creswell, 2013) explained how interview data, when using phenomenology, is analyzed. He noted that the procedure involves the steps of:

> …reducing the information to significant statements or quotes and combines the statements into themes. Following that, the researcher develops a textural description of the experiences of the persons (what participants experienced), a structural description of their experiences (how they experienced it in terms of the conditions, situations, or content), and a combination of the textural and structural to convey an overall essence of the experience. (Creswell, 2013, p. 80)

Merging Moustakas (1994) and Creswell's (2013) analysis flow and representation approaches for phenomenology data analysis, the following systematic procedure was used.

The initial steps in the systematic process included the *epoché,* eidetic reduction including the bracketing of the research question, data collection, and horizontalization (Figure 1). How these steps were used are explained and visualized below.

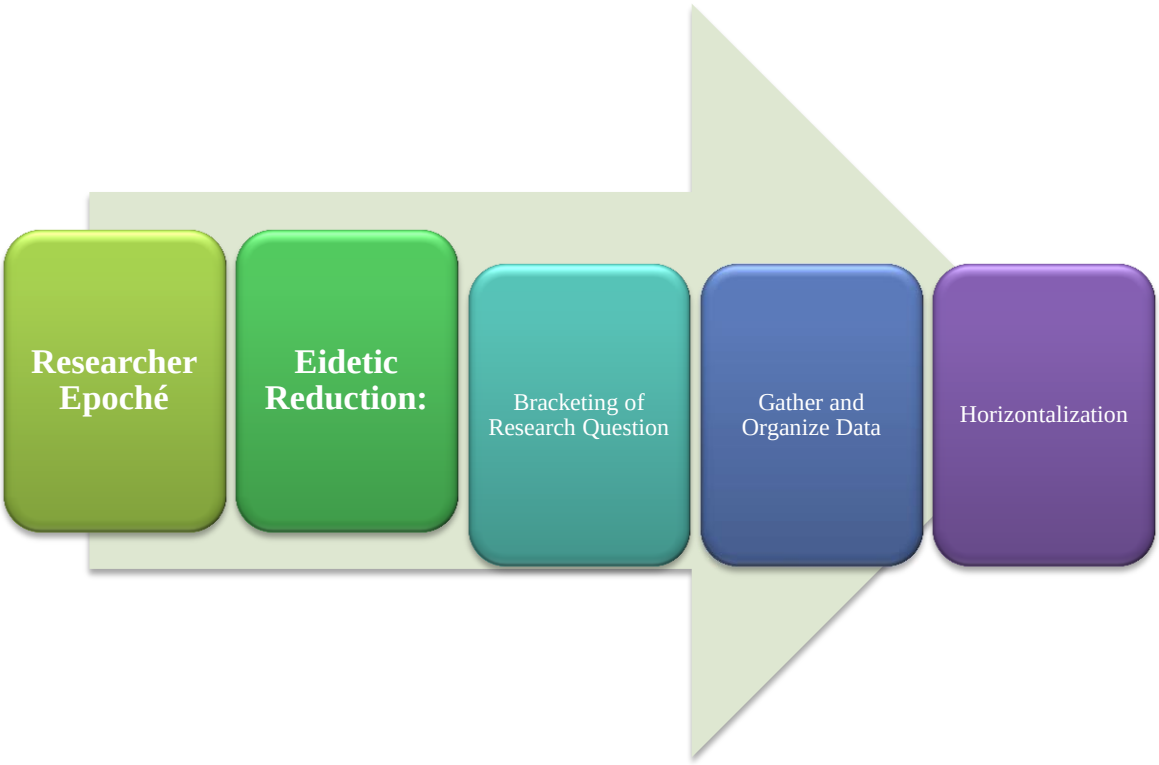

Figure 1: Depiction of the first steps of the phenomenology method used in the study, beginning with the *epoché* and leading to horizontalization.

- Epoché (prior to study)
    - Researcher & Peers: Setting aside the naturalistic attitude
- Eidetic reduction
    - Researcher & Peers: Bracketing of the research topic: Writing a subjectivity statement. Setting aside assumptions related to the topic as best as possible
    - Researcher: Collection of and organization of data
        - Data saved in folders
        - Transcription of interviews to Word files

        - Sharing of transcripts with co-researchers
    - Horizontalization
        - Researcher & Peers: Reading though texts several times while making margin notes (memos) and highlighting to give each statement equal value. Form early margin codes
        - Researcher: Return to co-researchers to fill in gaps, ask for clarifications, and ask newly emerged questions (also see Figure 4)
        - Researcher & Peers: Delimited horizons—find the experiences that 'stand out' and remain unchanged—codes
        - Researcher & Peers: Individual textural description—"Summary stories"
            - The non-changing (invariant) textural elements, "codes", from each co-researcher
            - Description of individual co-researcher's personal experiences
            - Review statements and arrive at consensus about meaning units
        - Peer review: Imaginary variation
            - Review various possible meanings
            - View the data from various angles

The final steps of the phenomenology method used in this study are shown in Figure 2.

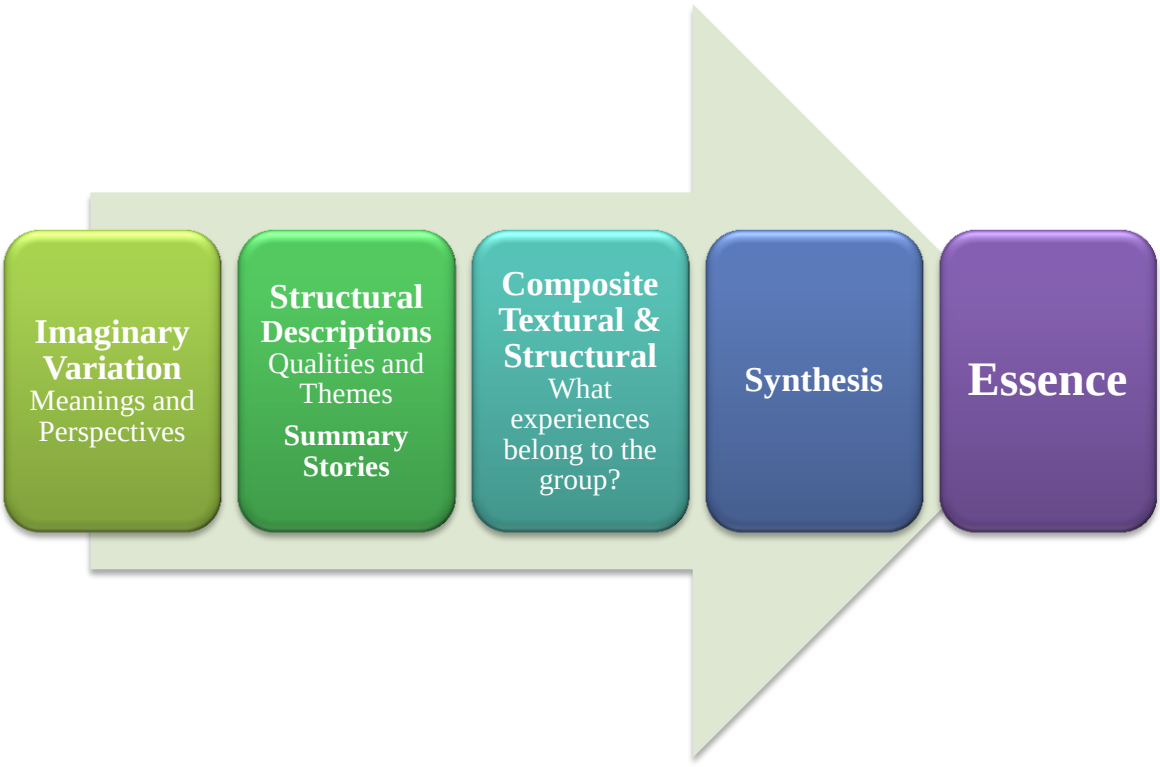

Figure 2: Depiction of the final steps of the phenomenology method used in the study—imaginary variation through essence.

- Structural descriptions:
    - Peer review: Discuss significant statements to support emerged codes
    - Researcher: Return to co-researchers for validation of individual summary stories (also see figure 5)
- Composite textural & structural descriptions
    - Peer review: Formation of a universal textural description from the textural descriptions of all co-researchers. What experiences belong to the entire group?
- Synthesis toward essence: interpreting the complete data set

    - Researcher & Peers: Develop a structural description of "how" the phenomenon was experienced by the group
    - Researcher & Peers: Develop the "essence" the qualities and themes of the group
- Representing, visualizing the data
    - Researcher: Present narrations of the "essence" of the experience in tables, figures, or discussion/reflection.

Data management and storage

The recordings and the transcriptions from the interviews were kept on a personal stationary computer at the researcher's residence during the time of transcription and analysis with the exception of the four interviews that were transcribed by a graduate student. These last-mentioned interview transcripts were shared over a password protected Internet drive until completed and then deleted from the drive. The residential computer is password protected and resides behind a firewall.

A second set of data, including printouts, is kept in a fire-safe box at the researcher's residence during the time of the study. After the study is completed, the data will remain in the fire-safety box for five years in keeping with the University of North Texas' IRB policy, after which it will be destroyed. Also in keeping with university guidelines.

After completion of the study, all data will be transferred to the office of the major professor in a digital format and kept in a locked file drawer for the duration of the UNT documentation retention guidelines.

Validity and Reliability

Validity is the true picture of what is before us. In the context of the lived experience of the people participating in this study, the operationalization came from asking designers and instructors in various locations to participate. I refer to these participants as co-researchers because phenomenological research places emphasis on interactions and sharing personal experience. In a phenomenological study of shared consciousness, and as Polkinghorne (1989) expressed it; "people are not to be treated as experimental objects for the use of a researcher; the role and responsibility of the participants is to share their experiences with the researcher [- to be informants and] provide rich descriptions of the experience being investigated" (p. 47). The researcher's responsibility is to plan, implement, analyze, and write about the study.

Polkinghorne (1989) noted that, to avoid error, "the researcher needs to choose an array of individuals who provide a variety of specific experiences" (p. 48). The definition for co-researcher was therefore left broad, as I did not want to exclude anyone due to gender, race, educational level, or location, nor did I want to point directly to the already obvious and observable presence of select common features of co-researchers. My array included designers and/or instructors who had designed or used alternate-reality games or transmedia storytelling into learning and teaching contexts. This group of individuals included co-researchers with experience from working within one, or multiple roles; these include instructor for these constructs, the instructional designer of it, and/or supporting learners using ARGs or TS as they were used for teaching by others.

Lived and shared experiences are, by nature, phenomena of the world that are individual to the human being. No one experience may exactly mirror the experience of another, and the experience of one human being may not be replicable with another. I was not seeking full unity

in representation. I did not seek validity in this study as a mainstream psychologist would—through the use of instruments to ensure that the instrument measures what it is supposed to measure and that the same results can be achieved consistently when using the instrument as a positivist would. Nor was I taking in the facts and truth of things through my senses pondering how they could be "other than the way they are" like an empiricist would (Giorgi, 1988, p. 168). Instead, I looked for truth and reliability to emerge from the study of the phenomena of the co-researchers' shared experience and the essence of their stories, avoiding added explanations of how the experiences could have been impacted by the natural world.

Giorgi (1988) promoted a cautious approach and:

> not [to] assume that the questioning of phenomenologically-based qualitative analyses takes the same form as analyses based upon a quantitative perspective. Two paradigms are involved here and one cannot merely assume that validity and reliability have the same meaning in the two paradigms. (p. 168)

With this paradigmatic research challenge in mind, he continued,

> The point I want to make is that the use of validity and reliability as critical features of the logic of mainstream psychology is tied to logical-empirical philosophy, with all its assumptions, concerns and interests…. However, when I work within a phenomenological framework I find that the necessity for dealing with validity and reliability as I understand them in the indigenous context, is not compelling in the same way. (p. 169)

With this in mind, my identity is an important consideration to reflect upon. I am an instructional designer. I teach instructional design. When I practice instructional design, I am a pragmatist

working with subject matter experts to design instruction that is effective, efficient, and appealing. I take a naturalistic stance as an instructional designer; however, as I engage in phenomenology, I use *epoché*. Following Husserl's original phenomenology, I bracketed during my study, and set aside the thesis of the natural standpoint as well as my pragmatic practicality. Cahoone (2010) noted that Husserl neither denied that there was such a thing as a natural attitude, nor did he ask the phenomenologist to disbelieve it as Descartes did. Instead, as Cahoone mentioned, Husserl simply asked the researcher to set the thesis of the natural attitude aside while engaging in phenomenology. The natural standpoint, as described by Cahoone, is the belief that intentional acts are objects and that these are 'caused by natural things', i.e., the physical world. Husserl wanted to avoid the idea that nature imposes on experience and instead looked at the basic most fundamental evidence there was—sheer consciousness—experience.

Giorgio (1988) explained validity as "a correspondence between a proposition and the ability of a referent to match the proposition, and reliability to how consistent the match is" (p. 168). The main approach with this study was by phenomenology. However, within the science community as well as within our field of instructional design, there is a lack of consensus as to how to approach reliability and validity in qualitative studies such as phenomenology (Beck, Keddy, & Cohen, 1994; Polkinghorne, 1989). How I approached methodological rigor is described next.

Methodological rigor

Qualitative inquiry is often scrutinized for authenticity. Ideally, data for qualitative studies should be gathered from various sources for validity and to establish trustworthiness. Beck, Keddy, & Cohen (1994) and Giorgi (2002) voiced reliability and validity issues, e.g., that other researchers in our holistic community of scientists may pose against the use of

phenomenology. This specifically includes the subjectivity of having a single person identify the experiences of others. Beck et al. reviewed and discussed three phenomenological researchers' methods (Colaizzi, 1978; Giorgi, 1988; and van Kaam 1966) and found that only van Kaam (1966) suggested the more rigorous means of having descriptive (utterances) "agreed upon by expert judges" (p. 256) and only Colaizzi suggested returning to the participants for final validation (member-checking). Giorgi (1988) advocated the original view of Husserl's phenomenology method with bracketing being the only necessary means needed for a researcher with this methodology.

An additional layer of rigor

Within my qualitative research, reliability was initially established with the traditional method suggested by Husserl, i.e., performing the epoché followed by the eidetic reduction, starting by writing a subjectivity statement, but also by adding additional steps to allow for rigor (Figure 3) to satisfy proponents of natural science. These steps included collecting data from varied sources as depicted in Figure 4, epoché and peer review, as well as member-checking, depicted in Figure 5.

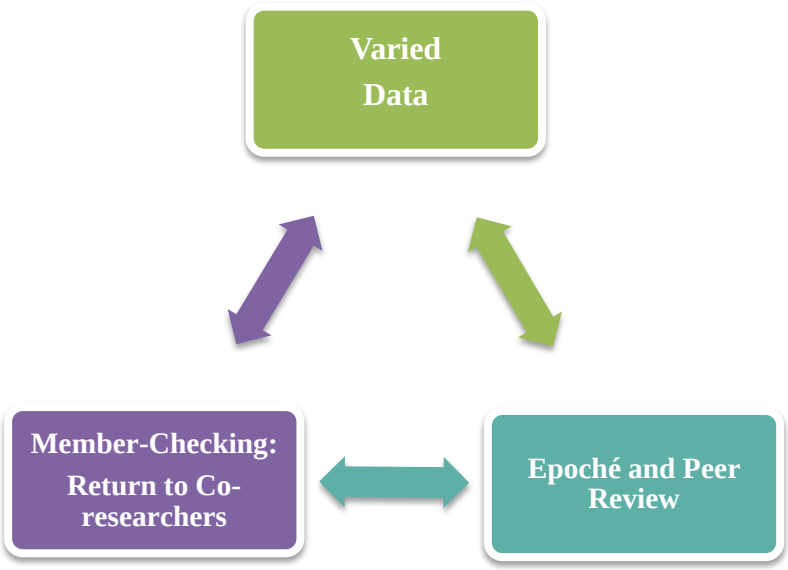

Figure 3. Visual depiction of the method used to include additional rigor. This included: Varied data, *epoché* and peer review, and member-checking.

The data was varied (figure 4) by means of including co-researchers who were both of female and male gender, were instructional designers and/or instructors. Eleven interviews were conducted providing an uneven, varied, and large enough number of experiences to be analyzed. Further, interviewees were located in various places in the United States and in Europe to provide a location-wise broad sample size.

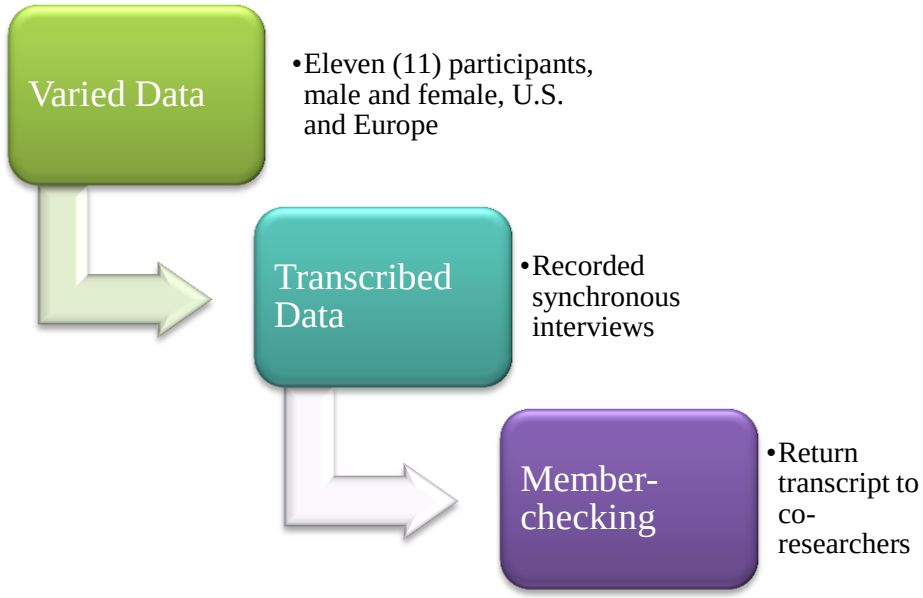

Figure 4: Visual depiction of varied data.

The researcher invited all interviewees to participate as much as they wanted in the study as co-researchers, as is usual in phenomenological studies. After interviews were transcribed, the researcher returned the transcripts to the co-researchers, seeking input, a step suggested by Colaizzi (1978).Co-researchers were asked to add or subtract from the transcript as they wished.

Peer review

Additionally, peer review took place to validate the data. This is a step often used in other types of qualitative studies and one possible step to validate data as described by Creswell (2013). This approach was deemed necessary, as there was a call for traditional qualitative means of rigor in my research from the Department of Learning Technologies and from my committee in order to proactively address potential concerns. Peer review in phenomenology has been suggested by van Kaam's (1966) who referred to it as "expert judges" and with the role to review

the researcher's analysis. Consequently, I hired two researchers for peer review who both performed the epoché and wrote individual subjectivity statements prior to engaging with the data analysis (Appendix A). These peers individually read the entire transcripts, made margin notes and beginning codes, and highlighted significant statements, as did the researcher. The analysis team then came together as a group and worked on the analysis for validation of placement of utterances into codes (Figure 5).

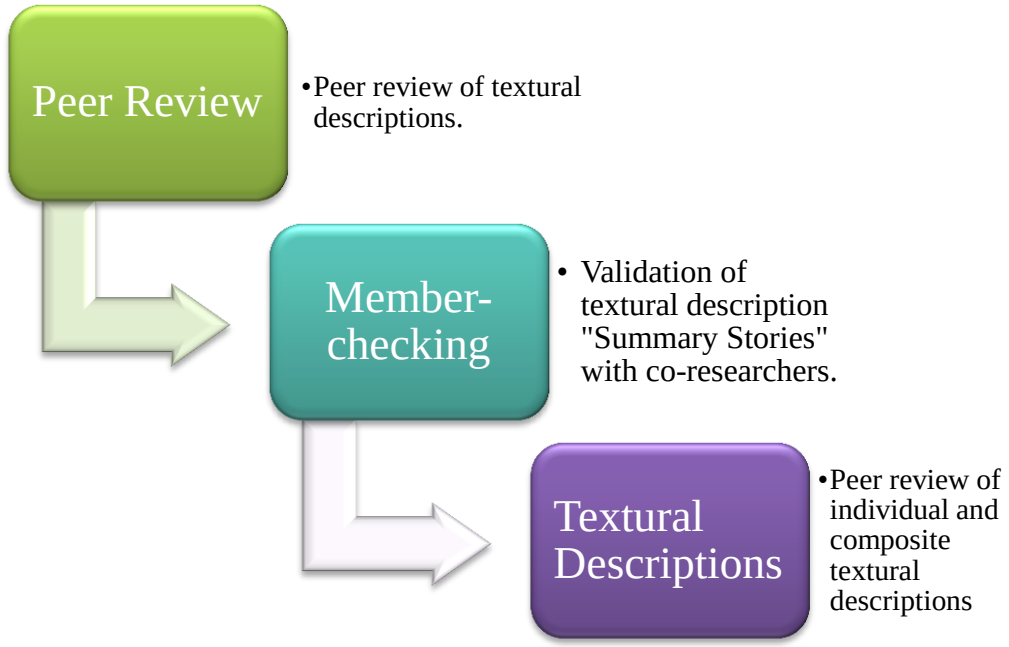

Figure 5: Visual depiction of peer review and further validation by means of member-checking—returning to co-researchers.

The analysis process took place within the transcripts and the summary stories of the transcripts. These summary stories were developed at the end of each individual transcript to paint a succinct picture of each co-researcher and thereby provide the textural description of each co-researcher. When there was disagreement, we reasoned among us where the utterance might fall and placed such an utterance after reaching agreement, or discarded the utterance when agreement could not be reached.

The choice of peers to help facilitate coding was made based on availability, skills, and knowledge of data analysis. Both held Masters' degrees and one is currently working on her Ph.D. Both had engaged in research studies previously, and were interested in my research topic of lived experiences, narratives, and games for learning and teaching. Each received a small sum of money compensating them for their time.

Member-checking

Member-checking, aligned with Colaizzi's (1978) analysis suggestion of returning to the co-researchers was used several times in the analysis phase. First, when I had additional questions to ask while transcribing the audio recording, I returned to the co-researchers to ask questions. Secondly, as transcripts had been typed up they were sent back to the co-researcher to allow them individually to add or subtract to their transcript prior to beginning the analysis phase. Third, as summary stories had been agreed upon in peer review, the summary stories were sent back to the co-researchers to allow them to review the picture painted and propose changes (Figure 5). Eight of the 11 co-researchers returned their summary stories; one with minor changes, the other seven with a note of approval. This three-corner approach ensured that proper methodological rigor was established in this study in keeping with ideas researched by Beck, Keddy, & Cohen (1994).

Ethical considerations

This study was conducted to search for the essence of the co-researchers' experiences and phenomenology was chosen as the most appropriate research framework for the study of lived experienced. To maintain an ethical stance and consider the quality of life of all people involved in this study, I, as a research professional, protected co-researchers by minimizing any negative consequences for them to participate in this study. I was careful when selecting (inviting) the

participants and when looking at the personal data shared by them. I offered anonymity if requested; however all 11 co-researchers, initially agreed to participate with their names. After the analysis stage one participant asked to participate without their real name and was given a pseudonym.

Creswell (2008) emphasized that participants in any study determine the outcome. While careful in my invitation for participation, I also made sure to invite as many instructional designers and instructors as I could find who were willing to participate, and who fit the criteria. I further took steps to make the interview minimally disruptive to both the participant and people in my proximity.

Further, I sought and obtained approval prior to my study through the UNT Institutional Review Board (IRB) and shared an informed consent form with my participants (Appendix E) prior to interviewing my co-researchers. The informed consent form allowed the participants to acknowledge the nature of the study, provide permission for participation, allowed me to gather data, and share this data, including the interpretations made at the conclusion of the study. Should any of the participants have wished to withdraw from the study, they were able to do so up to ten days after completing the interview.

Summary

This chapter introduced to the reader the methods by which the study was conducted and how study participants were invited to participate. Phenomenology, the employed methodology, the way chosen for inquiry, was introduced, and how and where interviews for data collection took place were explained.

Moustakas (1994) articulated how phenomenology allows the researcher to bracket out assumptions in order to be open to participants' lived experiences—the perspective of individuals. Validity, reliability, and academic rigor were expanded upon. Using phenomenology is not without problems; however, this methodology allowed me take a systematic approach toward the central point that emerges from co-researchers' reflections of their lived experiences and to contribute new knowledge to our field.

CHAPTER 4 - PRESENTATION OF DATA

Introduction

This chapter begins with a brief review of the research goal, method employed, the relevance to the field, and further introduces the co-researchers. Data from the interview transcripts are then shared. The chapter concludes with the composite textural and structural description of the data—the essence of the phenomenon that was studied.

Research Goal and Method

The goal with my research was to garner the true essence of lived experiences of co-researchers and to share the intentionality, lived experience, and commonality of instructional designers and instructors who use or have used alternate reality games (ARGs) and/or transmedia storytelling (TS) to educate. I followed research methods outlined and suggested by scholars Creswell (2013), Colaizzi (1978), Husserl (1962; 1970), Moustakas (1994), van Kaam (1966), and van Manen (1990; 2014) as explained in Chapter 3. This included performing the epoché and the working the steps of the eidetic reduction toward the essence of the experience, but also including peer review and member-checking to increase rigor in my research.

Co-researchers

Co-researcher demographics

Eleven participants signed an electronic consent form to participate as co-researchers in this research study: nine men and two women. Ten participants are from the United States and one is from Europe. All of the co-researchers are Caucasian. Four of the participants worked within K-12 settings, five worked in higher education, and two of the participants were

independent transmedia game designers/consultants who use transmedia games and stories in informal learning environments to target a global audience.

Co-researcher introductions and continuum

To better understand the orientation of the mind from the perceived state, that is to say, the shared lived experience of the individual co-researchers toward the object—the noetic, the given—we need to consider that when an object appears in the mind the perception may vary depending on several variables. Considerations include when it is perceived, in what light, in which situation it is perceived, with what mood, and from what vantage point the individual perceives it (Gurwitsch, 1966; Moustakas 1994). This is the "noema of perception—namely, the object just (exactly so and only so) as the perceiving subject is aware of it, as he intends it in this concrete experienced mental state" (Gurwitsch, 1966, p. 132). To provide the reader with an idea of the participants' initial vantage point, abbreviated co-researcher introductions are made available in Appendix E.

Further—and because the co-researchers were both instructors and instructional designers and sometimes held multiple roles within these professions—it was deemed prudent to review where on a continuum they reside based on the shared experience from their interview. The continuum includes the roles of instructor and instructional designer, but also the role of support, to more clearly share with the reader a snapshot of each co-researcher (at the time of the interview). For example, in the interview, co-researcher Lance Weiler shared primarily from his lived experience as an entrepreneur designing experiences and teaching. As such, his location on the continuum can be found to the right, half-way between instructional designer and instructor. Co-researcher Matt Crosslin, on the other hand, shared his lived experience from the roles of

instructional designer and instructor, but he also shared from his role as support of learning environments, which places him near the middle of the continuum.

The continuum was first drawn separately by the researcher and the peer reviewers after they had each read the transcripts in their entirety. They engaged in a data analysis of the transcripts and then each one decided where the co-researchers would fall on the continuum. The researcher and the peer reviewers then discussed the placement on the continuum during their meeting to review other data in this study. After discussion and adjustments, Figure 6 is the graphical representation agreed upon—and provides an additional vantage point other than the co-researchers' introductions mentioned above—to guide the reader when reviewing and interpreting the findings of this study.

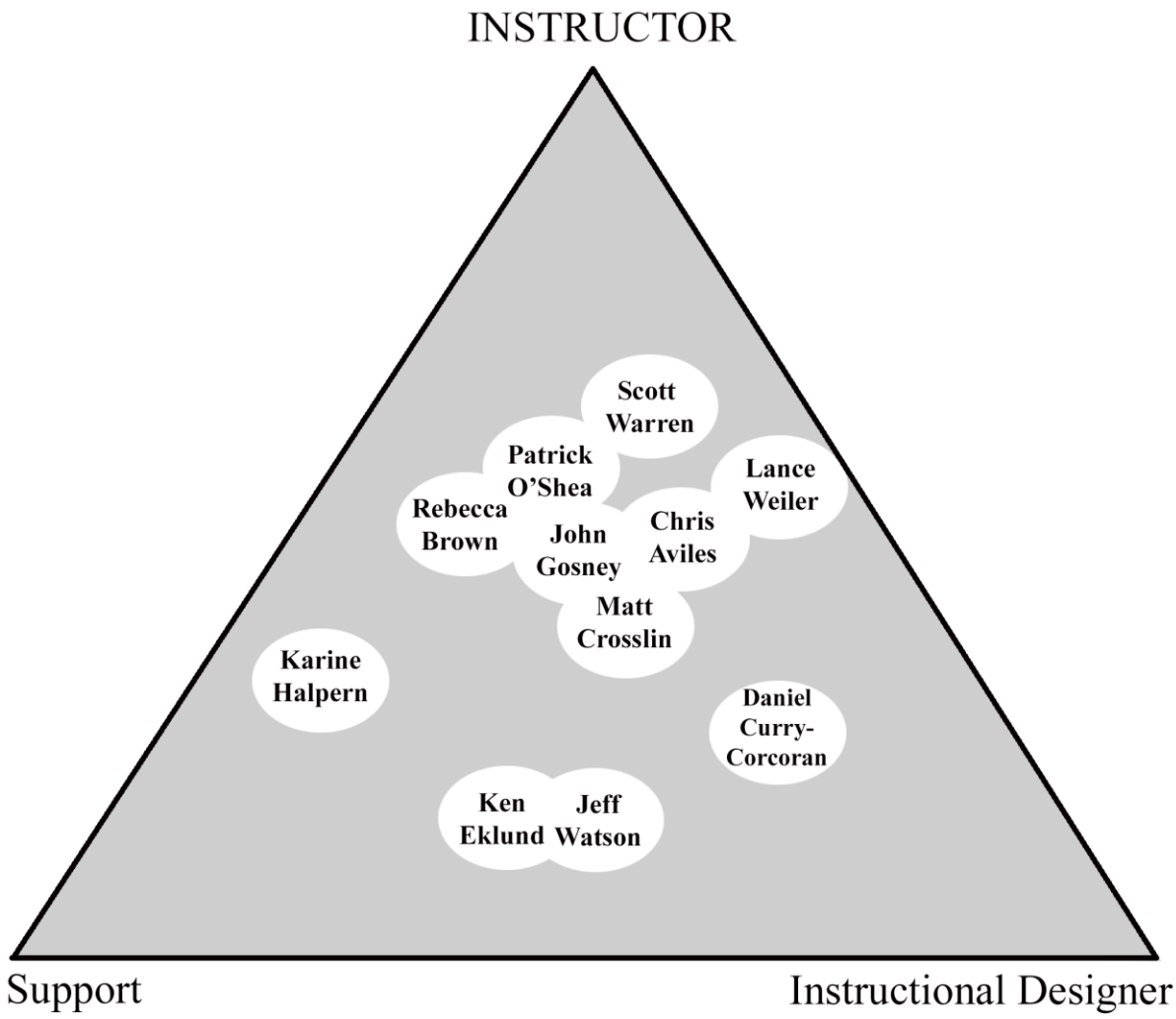

Figure 6. Co-researcher continuum.

Themes/Meaning Units

In this study, I looked at the lived experiences of instructional designers and instructors to gain insight into the culture of teaching, both formally and informally, with alternate reality games and transmedia storytelling. I sought the co-researchers' shared experience from using narrative and game-infused teaching. My research question, inspired by the muse, was "What is teaching with alternate reality games and transmedia storytelling for instructors and instructional designers and how does this reveal itself?"

Phenomenologists seek patterns and structures. When engaging in pattern recognition parts of a more complex whole surface—a structure becomes visible. Structures are parts of something that has been built, organized, or arranged. According to Moustakas (1994), the imaginary variation "is to seek possible meanings through the utilization of imagination, varying the frames of reference, employing polarities and reversals, and approaching the phenomenon from divergent perspectives, different positions, roles, or functions" (pp. 97-98). By redirecting my vision, trying various meanings, looking at the phenomenon from several angles, and freely seeking and considering conceivable structures that transcend obvious explanations, I sought structures together with my peer reviewers through the co-researchers' lived experiences as described within the summary stories (Appendix H) and the codes and themes.

Six themes emerged from this analysis on co-researchers' lived experiences of teaching with alternate reality games and transmedia storytelling, that is, game-like narratives and layered instruction. These themes are similar to each other in that some contain concepts that are crossing several themes. The borders between or among these themes are blurred and the ideas, or meaning units, within them are fluid and flexible. Given this mutability, the themes are not numbered. Example evidence statements for the themes are presented in Table 1.

Table 1. Themes/Meaning Units and Evidence in Co-researcher Shared Lifeworld

Themes/Meaning Units	Evidence in co-researchers' shared lifeworld
Initiating & Promoting: Critical thinking, problem-solving, self-directed learning	*Aviles*: I think a well-designed classroom looks like a well-designed video game. And that is re-framing failure, iteration, and the ability to obtain mastery, to be self-directed and self-paced, for the classroom to be fair. So I think all those principles that go into designing a good video game, I think do well in the classroom.

	Brown: I try to start off the day with a critical thinking problem. And whether it is a game like *Mad Gab* or we look at a visual discrimination, I found over the years a lot of the times students are kind of reluctant to get into that thinking mood. They come to school sometimes thinking that the teacher is going to think for them. So that is our big goal—to get these guys thinking! *Curry-Corcoran:* I really like this idea of self-organizing systems…if we get out of the way of students— the idea of the flipped classroom—they [students] can be responsible for their own learning and we can help them organize themselves rather than making sure we tell them what's correct. [For so long] we've conditioned our students to come to us for all the answers. There's almost an innate inability not to look things up these days. They always want to come to us and say, "What do I do next?" And there's such a bit of discomfort there, when you look at them and say, "I don't know." [But] students will figure it out! They'll self-organize. *Halpern*: For me transmedia is more than TS. It refers to a way of thinking, you know, or a way of, a special way of interactivity. It is multiple interactivity it is also a way of getting people together. *O'Shea:* So, the point here is the idea of becoming familiar enough with your students' lives in order to make connections with them *and* becoming familiar enough with the technology tools that are available to us in order to start making arguments for their use rather than just accept the arguments against their use. And that's what education often times does, knee-jerk reactions against social media or against MMOs or against any of these technologies simply because of all of the bad things we hear about them. But we don't. We never—I don't want to say never because that's a broad stroke—but we sometimes don't make arguments for things when those arguments can be made and should be made. *Warren*: With these types of games with these students, I really wanted them to engage in critical and creative problem-solving types of thinking, these higher order types of skills so they really ought to interrogate the story…think more deeply about what they were learning from it and what they will learn from it.
Activating Interest: Authentic, meaningful and affective, immersive	*Aviles*: You have to have a coherent story. The story has to be—it sounds stupid but the story has to be realistic. So even though I have a girl trapped in the future, it's like…you can suspend

disbelief to believe that. If you have a ridiculous story then kids aren't going to buy into it.

Eklund: There is a very clear invitation to participate very meaningfully in the story. And so looking essentially at kind of what the mechanisms are that kind of create the circumstance by which people feel like, "Yes I'm going to sit down right now and I'm going to script out and record a voicemail from the future," and it's kind of a significant, creative thing that we're asking for and you want to really respect that gift by kind of creating a space where it can very successfully live as part of the project.

Gosney: It takes a little bit of modeling to get them to see how that is done, but once they sort of get over that idea, and they understand and appreciate that I want them to pull in other areas of interest-to find connections between what we are studying and their own majors-that really opens the door for a lot of them- in terms of both the quality of their writing and the ideas that they are able to come up with them, and then classroom discussions as well.

Halpern: So maybe, send a very important message to people so that when they play a game they want can win something because the reward is going to be important for their education or the game is going to be important for their culture, their knowledge or an activity outside in the community. Something more than just entertainment.

Eklund: But you can get an idea about it if at the end of the project they go, "That was really a meaningful thing to me, it's really made me rethink the way I live my life. It's caused me to think very deeply about this issue, it's presented me with avenues, different *ME* [italics added] that I could become. I've really kind of thought about those things." So to me, that's what I think a really effective experience is all about.

Warren: [The beauty of narrative is that it] gives them connections to something that's more situated, and we talk about situated learning. It situates them within a story that they can relate to that somewhat makes sense to them, whereas if you just learn or try to learn something in a completely decontextualized fashion, there's not anything to hang your learning onto. So—that situated cognition is really, really important, especially to get them to get into these problem-solving abilities, and knowing what they don't know and knowing what they need to know.

	Watson: If you can find a way to give your students, to figure out what your students want, and then give them an opportunity to do that. They are then going to start learning all the things they need to learn to do that thing they want to do. And that is then going to inspire them to learn more because they are going to start forming new desires about bigger and better projects. So we wanted to find ways to really unleash the power of our player's desires rather than try to fit them into a mold of a story that we thought would be good for them. *Weiler*: I think you could say I am like a storytelling agnostic. It doesn't matter to me what format or screen or device, you know, if there is technology or not. But I am really interested in just telling a story and hopefully helping to kind of evoke emotion or empathy or some greater sense of understanding through storytelling. And I guess in a sense I am almost like a creative entrepreneur. Now…being recently appointed to be the director of experiential learning and applied creativity at Colombia University, I am kind of tasked with experimenting with what the future of the university is and looking at the future of work and learning and it is just really interesting to look at that trajectory.
Inviting: Play, fun, choice, buy-in, and participatory	*Aviles*: [Students] earn achievements for doing really cool stuff. And, with those achievements they can buy things out of the item-shop. So, I gamify my class. My class is a video game. I also teach with video games. I show them how to do stuff in *Minecraft*, how to code with *Minecraft* and how to take things out of *Minecraft*, put things into *Minecraft* using other games…and then I have the alternate reality game on top of all that. It's three-levels of games going on. The reason why I designed and started to play alternate reality games was my HS is a title one HS. We have really tough kids. And so the kids who weren't playing sports were going home to empty houses and I worried that they were getting in trouble. So here is that extra stuff that they can do, from me, that is kind of fun. *Brown*: I try let them bring…that is important to me, that creative spirit. That is important in what I do personally and it is important in what they do academically and personally and see what they can really hook into…how they can…and even though if they don't feel like they are particularly creative we have been finding that a lot of students who don't feel that way, they are. *Curry-Corcoran:* Who doesn't like to listen to a story? We all do. So it's been kind of, it's been a powerful experience too. I just

want kids to play, I want them to have a good learning experience, you know!

Eklund: So, if people do not participate, basically nothing happens. So there is a very clear invitation to participate very meaningfully in the story…When people are in a play state, they are in a learning state. And they're also in a state where they are more predisposed to actually incorporate that learning into their lives, to retain it, to consider it, to make it part of their identity.

Gosney: I asked my students to take on the role of supernatural field agents and I tell them that over the course of the semester, I want you to visit four locations. And those locations can be anywhere you want. I want them to be within the continental United States, but you can go anywhere you want. And while you are at these locations, I want you to file three reports.

Halpern: But for me transmedia storytelling is a transmedia experience and transmedia design is an evolving interactivity and participatory culture. And that is what makes it powerful! For me the story does not matter: It can be a very small message, a very small experience that doesn't cost a lot of money, Something you do with friends, or you with students at a school, or it can be a huge production for entertainment.

O'Shea: If you create a game that is played by your peers, then it becomes not only something that your peers can learn from, but the quality of your interaction with it, what we've found in the textbook approach, is that the students that develop it and create it take it more seriously. And so regardless of what they're creating, if the creation is shared among the group as a source of content, then it's powerful.

Warren: I like to tell stories. It's fun. I like to make connections through the stories that I do, but their [students'] stories are just as valid as mine are, and it allows them to make bigger connections out into the world and see how they fit. What is their identity? It allows them to try things on in a way that if I designed for them, I take a lot of that agency away from them…and I do not want to do that.

Warren: My traditional role had been to design and develop educational games, but what I've come to find is that it's much better if they build them than if I do. It's better for me to facilitate because then they get buy in…and what I wanted was for them to build because then they really became invested, they really

	showed what they knew. And because I believe that everything changes so rapidly, it's much better to have them build, based on what they value, what they perceive as valuable, based on their personal identities and their connections to others. *Watson*: A game is something that you do, something that you invite into your life. In a way, a game can't be real to you, can't really be a game unless it is something that you are inviting and saying "Yeah I want to try that out—I want to do that." Because, otherwise it is like actually a difficult task that is kind of getting in the way of you doing something else because usually the games are about overcoming all kinds of different obstacles. So, if you want to use games in education, you have to create something that your students will invite into their lives. You can't just force it upon them, because if you just force it upon them, actually they're not really playing. *Watson*: But the real lasting learning that has really had an impact on who I have become as a person and what I have done professionally has been stuff that I have largely learned on my own because I have been chasing down something that I am excited about. And so that is where we were trying to do…create a space where people could chase down the things that they are excited about.
Supporting & Encouraging: Ownership, content creation, public voice, and agency development	*Aviles*: So instead of doing work kids go on quests, they earn experience points…and the quests will lead kids down [a path]. Some are coding, some are engineering, and some are designing. Some [quests] involve learning and creating with *Minecraft*. We are a big bike community, so I have the police department giving us bicycles. We are going to take broken bicycles, rebuild, re-working bicycles out of them and then send them to a school district in need. So, it is a lot of hands-on STEM maker space kind of stuff [that we do]. *Brown*: So to me, it's that opening… looking at… at how we can bring back our creativity into the classroom and then to bring out the creativity that is naturally in all people, but I think for a long time that creativity is kind of held down. *Watson*: These kids wanted to start making right away and a lot of them had really great talents. They were able to share these talents with each other and this sort of gave them an environment to, to play in. A space where they could really play in and that for me is what I am most interested in: creating with these kinds of games

	as a place where people can meaningfully play. *Weiler*: I am more and more interested in the idea of an experience. And this idea that challenges the notion of authorship and ownership and create these environments where people feel like they have agency. And some of that borrows from play and some of that borrows from design thinking. And some of it just borrows from, you know, this idea to experience design…a lot of my interests I think stems from that ability to create those environments and then allow people to feel like they have agency within them.
Disrupting Catalyst: Chaos, change, Struggle/failure, and technology	*Aviles*: And the kids who were mostly actively participating were the kids that weren't involved in any extracurricular activities… They would have a meeting about the alternate reality game and how to solve the puzzle and [about] what they think they should do next. So for me, for them to be there with me rather than going home and getting in trouble. *Crosslin*: But courses are essentially hitting on layers. Several levels of people, maybe some people have some experience, some are new, some are very advanced. Trying to pull them together…I think that would make a good use of this approach or especially if you have a course that is going to have a mix of beginner and experienced people. I think this would work well with any kind of topic. This approach could be very helpful because it could keep the more experienced learner from being bored. When basic constructivist stuff is going on, they can keep the new people from becoming too overwhelmed. A little bit of pressure and chaos and…but you still don't want to overwhelm people so that they give up. *Curry-Corcoran*: I like the whole idea of disruptive technology, whether it's Facebook or Twitter, any of these things that kind of disrupt the norm. We've been able to go out into schools and develop activities for students that are independent, are process-based, where students are actually applying what they learned, and it's this idea that they are, in effect, on their own or they're playing a role, they are a, say geologist. And so when they come to me and say, "I don't know what to do," I say, "Well, I've never been a geologist, I have no idea." And, you know, they get terribly frustrated… So giving students some time to be frustrated, it kind of kicks their imagination like when they're playing a video game. When, you know, I'm thinking of Mario Kart or something like that where they keep falling off the ramp.

The only way to cross the ramp is to keep pushing the button… This idea of finally watching a kid get to the level of frustration where he's about to quit, and then you can raise your hand and say, "Where are my other geologists in the room?" And now he's got a small group, now we have a self-organizing system over here where students are working with students, right?

Gosney: The ideas that they generate amongst themselves are often far more engaging to them. And some of the things that I even suggest to them. A lot of these students don't have a lot of opportunity to this point, they have not had enough opportunity to collaborate on assignments, so it is, in addition to giving them just a new set of people skills and ability to interact, it gives them just another voice, other than mine, on the work they are doing. So I think it is extremely important.

O'Shea: And what I try to do with the class is give my students time to explore the environment and I tell them, "Find things that you're not familiar with, go and play games that you may not have played before. Just explore the horizon just to see what's out there. And then come back and we'll talk about them in terms of their educational usefulness." And invariably, I get students who start the semester who say, "Well I'm not a gamer, I'm not interested in this stuff." And I say, I tell them, "That's fine. I'm not trying to make anybody in this class into a gamer. That's not my purpose at all. What I'm trying to do is get people to be, to gain an appreciation for gaming culture. You don't have to be a gamer to understand that there is benefit to gaming." And I, by and large, have gotten really good responses from my students who come away, maybe not as gamers, but as appreciators of gaming in different environments and to see the utility of using these tools, which is important. That's the main thing for me.

Watson: I ended up really gravitating toward what I now call creative process design. Where I am creating game-like experiences, which help people to tell their own stories. I think one of the, for me, where I became critical of the alternate reality game, especially in context education context, is that often it becomes about the stories that the educators have to tell and the students having to kind of piecing together those stories. And to me that just seems like more of the same old education. What I am interested in is flipping the table and instead facilitating the learners to discover and create their own stories.

Weiler: I think where I touch into what would be those elements of story, immersion, play, transmedia, or alternate reality games,

	is I am trying to create an environment or space where I can break my students out of what they are used to. I can place them in areas that, or an environment that, are unexpected where they are able to potentially step into maybe someone else's shoes or they are able to look at an experience from a different [view]…see through a different lens. And so, within the classroom, I am very interested in that [kind of] use of narrative or the use of play.
Connection-Making: Collaboration, interdisciplinary connections, real-world issues, and innovations	*Brown*: Make them connect to so many things and the world is open to them instead of "this is the way." "Here is the one little path you must go." *Crosslin*: In general, we can try to focus more on teaching people how to be learners for a topic, rather than handing in current knowledge that can be outdated - you know - in a year from now. So if I can show someone how to be a learner or a student of instructional design rather than teach them the technical points I think that they will be a stronger student down the line and we don't have to, necessarily, be going back to the expert to answer everything. They can start and find their own connections and their own path, maybe contributing back to the field because they are not just following what people say but they actually also can contribute to it. *Gosney*: So, a primary goal of mine, perhaps the primary goal is to use this, again what I think probably is inherently interesting information or subject matter for these students, as a way in, to get them, to teach them how to be more critical readers. To look for connections between the kinds of material we are reading…not the subject matter per se, but the methodology that we use to analyze the material and how they can apply that to their own majors, in other coursework. *Gosney*: So, I am interested to see just beyond the discussion board how we might push that collaboration aspect through these different technologies. *Halpern:* You have to engage the students. You have to have a team. It is about the group dynamics. It is like when you do sports with the students. When they play ball game it is the same thing. It is both group dynamic how they are going to be together, talk to each other, so they can co-create, and the TS is a result instead a reason. Because if they [teachers] use transmedia storytelling it is difficult to engage the students; however, if the students create their own story themselves it is more appropriate, but still there is

	a lot of work to be done for community building and making sure that they have the right tools. *O'Shea:* You need to become familiar with where your students live in that free time, just in order to have some way of connecting with them. *Warren*: I like to teach through stories. It helps people make connections and engage in transfer because they can connect my stories to their stories more easily than if I just give decontextualized information. *Warren*: The more mature students really start to see the value of actually having to practice [collaboration] and connecting it to their future work, or their current work. We do have a bunch of undergraduates that are non-traditional students who could really see how interacting with a fictional client that responds in ways that, say a boss or an outside client, would respond. How learning to deal with those problems, learning to collaborate, learning to work together in ways that produce something useful…they really see that; whereas, a lot of the other students, they just want it over with. *Watson*: Students really wanted to win, and every week the leaderboard was reset so every week was one game. The top four players at the end of that week would be connected with an experience that they wouldn't otherwise be able to have. And often because this is the school of Cinematic Arts and we are in Los Angeles, often those experiences are really exciting, fun, and interesting. You know, for example some of the students got to go meet *Robert Zemeckis*, you know the Director of *Forrest Gump*. They got to go to his house and have dinner with him.

As mentioned above, there is great fluidity and flexibility between the themes as meaning-units intertwine. Following are descriptions of themes with exemplifying evidence.

Theme: Initiating & Promoting

This theme included critical thinking, problem-solving, and self-directed learning, which are components of problem-based (PBL) learning. Co-researchers shared in the interviews how they experienced the importance of initiating interest for learning and using problems to promote

critical thinking toward a more student-self-directed learning. For example, Rebecca Brown mentioned,

> I try to start off the day with a critical thinking problem. And whether it is a game like *Mad Gab* or we look at a visual discrimination, I found over the years a lot of the times students are kind of reluctant to get into that thinking mood. They come to school sometimes thinking that the teacher is going to think for them. So that is our big goal—to get these guys thinking!

In this case, Brown initiated interest by using problems and games. Problems require students to think, set goals, and solve issues. Daniel Curry-Corcoran used the approach of flipping his classrooms to get students into that same thinking mood. He revealed,

> I really like this idea of self-organizing systems…if we get out of the way of students—the idea of the flipped classroom—they [students] can be responsible for their own learning and we can help them organize themselves rather than making sure we tell them what's correct. [For so long] we've conditioned our students to come to us for all the answers. There's almost an innate inability not to look things up these days. They always want to come to us and say, "What do I do next?" And there's such a bit of discomfort there, when you look at them and say, "I don't know." [But] students will figure it out! They'll self-organize.

Patrick O'Shea, when teaching pre-service teachers, dove deeper into the thinking process. He felt that some thought processes often prohibit teachers to connect with the generation of students they are teaching. Instead of acknowledging that students use technologies

with which they are already familiar, such as games, some instructors take a stance against these technologies and this can impede pre-service teachers' learning. He explained,

> So, the point here is the idea of becoming familiar enough with your students' lives in order to make connections with them *and* becoming familiar enough with the technology tools that are available to us in order to start making arguments for their use rather than just accept the arguments against their use. And that's what education often times does, knee-jerk reactions against social media or against MMOs or against any of these technologies simply because of all of the bad things we hear about them. But we don't. We never—I don't want to say never because that's a broad stroke—but we sometimes don't make arguments for things when those arguments can be made and should be made.

O'Shea felt pre-service teachers need to be somewhat familiar with popular technologies used by students, so that they can promote or reject the tools, rather than rejecting them from a hearsay point of view.

As important as initiating and promoting learning is, co-researchers also reported that learning is most effective, best learned, and most memorable when the learning or the narrative leading toward learning is believable, the problem is closely tied to, or even set in the real world because this allows for learner buy-in. Closely related to initiating and promoting learning, activating interest by using such authentic learning was another theme from which all the co-researchers shared lived experiences.

Theme: Activating Interest

Jonassen (2011) noted that situated learning should "stress the importance of embedding instruction in authentic, everyday problems" (p. 160) and that to be called situated learning the learning should share problems and activities based on real-world situations. The assumption of

such learning, as Jonassen stated, is that the life relevance that the learner experience—the authenticity—will promote interest and lead to learning. Ken Eklund, another co-researcher, shared an example of such real-world learning that he considered an effective experience:

> …you can get an idea about it if at the end of the project they go, "That was really a meaningful thing to me, it's really made me rethink the way I live my life. It's caused me to think very deeply about this issue, it's presented me with avenues, different *ME* [italics added] that I could become. I've really kind of thought about those things." So to me, that's what I think a really effective experience is all about.

Eklund creates learning environments to give participants opportunities to think, set themselves deep into the situation, and feel like they are part of the narrative. Similar to hearing stories of lived experience by a campfire, participants are tasked with thinking about real-world issues through live, plausible experiences, such as in Eklund's *Ed Zed Omega*[14] experience. Set up as an immersive conversation transmedia experience, high school students were hired as actors playing the roles of students who were ready to drop out of high school because school wasn't working for them and engaging in real-world conversations with an online audience over the Web but also with young adults visiting the Walker Art Center in Minneapolis. This transmedia experience is expanded on in Chapter 5.

Co-researcher Scott Warren expressed that a narrative in the classroom can help his students build the cognitive skills necessary to provide a sense of functioning as an active agent of the world, and to problem-solve within a real-world context:

> [The beauty of narrative is that it] gives them connections to something that's more situated, and we talk about situated learning. It situates them within a story that they can

[14] http://edzedomega.org

> relate to that somewhat makes sense to them, whereas if you just learn or try to learn something in a completely decontextualized fashion, there's not anything to hang your learning onto. So—That's kind of—that situated cognition is really, really important, especially to get them to get into these problem-solving abilities, and knowing what they don't know and knowing what they need to know.

Similarly for Lance Weiler, storytelling and the affective message that stories provide are important because they situate the learner and bring forth emotions:

> I think you could say I am like a storytelling agnostic. It doesn't matter to me what format or screen or device, you know, if there is technology or not. But I am really interested in just telling a story and hopefully helping to kind of evoke emotion or empathy or some greater sense of understanding through storytelling. And I guess in a sense I am almost like a creative entrepreneur. Now…being recently appointed to be the director of experiential learning and applied creativity at Colombia University, I am kind of tasked with experimenting with what the future of the university is and looking at the future of work and learning and it is just really interesting to look at that trajectory.

In a 2011 Sundance Film Festival ARG designed by Lance Weiler—The Pandemic ARG[15]—participants learned they would have the power to survive the pandemic if they worked together. Collaboration through affect and meaningful activity provided a huge incentive for players. In this current dissertation research study, the co-researchers each shared the importance of inviting learners to take part, play, have fun, and engage in participatory learning—which leads us up to our next theme.

[15] http://www.lanceweiler.com/work/case-study-pandemic/

Theme: Inviting

Many players are addicted to "escape room" games[16] which allow players locked in a virtual reality room work together to solve mysteries and puzzles that will eventually unlock their room and allow them to escape from their self-imposed jail. In a sense, they invite these games into their lives to experience play, fun, choice, buy-in, and participatory learning, which are all part of the "inviting" theme. Co-researcher Jeff Watson emphasized that playing games in the classroom must not be forced and should be interesting enough for the students to request the play, i.e. an invitation. He said:

> A game is something that you do, something that you invite into your life. In a way, a game can't be real to you, can't really be a game unless it is something that you are inviting and saying "Yeah I want to try that out—I want to do that." Because, otherwise it is like actually a difficult task that is kind of getting in the way of you doing something else because usually the games are about overcoming all kinds of different obstacles. So, if you want to use games in education, you have to create something that your students will invite into their lives. You can't just force it upon them, because if you just force it upon them, actually they're not really playing.

To engage, motivate, and help students, Chris Aviles used a three-layer game approach to gamify his classroom. He revealed how he turned his classroom into an inviting video game to help students who would be in danger of dropping out or getting into trouble:

> [Students] earn achievements for doing really cool stuff. And, with those achievements they can buy things out of the item-shop. So, I gamify my class. My class is a video game. I also teach with video games. I show them how to do stuff in *Minecraft*, how to

[16] http://static.escapetheroomnyc.com

> code with *Minecraft* and how to take things out of *Minecraft*, put things into *Minecraft* using other games…and then I have the alternate reality game on top of all that. It's three-levels of games going on. The reason why I designed and started to play alternate reality games was my HS is a title one HS. We have really tough kids. And so the kids who weren't playing sports were going home to empty houses and I worried that they were getting in trouble. So here is that extra stuff that they can do, from me, that is kind of fun.

Ken Eklund shared his thoughts about the importance of inviting people to participate for meaningful play and learning, and where this leads by saying:

> If people do not participate, basically nothing happens. So there is a very clear invitation to participate very meaningfully in the story… When people are in a play state, they are in a learning state. And they're also in a state where they are more predisposed to actually incorporate that learning into their lives, to retain it, to consider it, to make it part of their identity.

According to Jonassen (2011), decision-making is a form of problem-solving that we engage in daily. A decision, he shared, is a course of action—a commitment. There are several kinds of decisions according to Yates and Tschirhart (2006), including choice, acceptance/rejections, evaluations, and constructions. Perhaps the most common decision is choice. Choice is also one of several important components of student success (Zimmerman, 1994; McCombs, 2001). Warren and Wakefield (2012) noted that allowing students their choice of technology tools in the learning experience fosters a sense of being "connected." However, this feeling, they added, is one which is perceived and requires what Lave and Wenger (1991)

saw as "participation in an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their communities" (p. 98).

All co-researchers allowed their students opportunities for choice. Rebecca Brown allowed her students buy-in by allowing them choose what and how to design and build their games. Jeff Watson helped students develop agency by allowing students act independently and make their own choices. Patrick O'Shea had this to say about student choice:

> And what I try to do with the class is give my students time to explore the environment and I tell them, "Find things that you're not familiar with, go and play games that you may not have played before. Just explore the horizon just to see what's out there. And then come back and we'll talk about them in terms of their educational usefulness." And invariably, I get students who start the semester who say, "Well I'm not a gamer, I'm not interested in this stuff." And I say, I tell them, "That's fine. I'm not trying to make anybody in this class into a gamer. That's not my purpose at all. What I'm trying to do is get people to be, to gain an appreciation for gaming culture. You don't have to be a gamer to understand that there is benefit to gaming." And I, by and large, have gotten really good responses from my students who come away, maybe not as gamers, but as appreciators of gaming in different environments and to see the utility of using these tools, which is important. That's the main thing for me.

O'Shea's statement clearly show how he provides choice to students, however, there is also this undertone of disrupting students as he wants them to take on something that they may not, at first, feel comfortable with. This statement is listed under "disrupting catalyst" in table 1, even though it belongs within both themes. The lines between the themes are much blurred indeed.

What Aviles, Eklund, and O'Shea touched upon in the shared utterances above leads us to the next theme, which has to do with supporting and encouraging learners.

Theme: Supporting & Encouraging

The theme "supporting and encouraging" includes meaning units of ownership, content creation, public voice, and agency development. Chris Aviles had students engage in quests to learn new skills and they worked together in a maker space—an innovation lab he had developed—on creative projects and real-world projects that support the community.

> So instead of doing work kids go on quests, they earn experience points… and the quests will lead kids down [a path]. Some are coding, some are engineering, and some are designing. Some [quests] involve learning and creating with Minecraft. We are a big bike community, so I have the Police department giving us bicycles. We are going to take broken bicycles, rebuild, re-working bicycles out of them and then send them to a school district in need. So, it is a lot of hands-on STEM maker space kind of stuff [that we do].

Bandura said "the developmental progression of a sense of personal agency moves from perceived casual relations between events, through understanding causation through action, and finally recognizing oneself as an agent of the action" (Bandura, 1997, p. 164). To develop personal agency, Bandura (1997) noted, an infant must first reach self-recognition followed by the experience that "they can make things happen" (p. 164); when the infant realizes that his the child's actions cause a social effect, the sense of personal agency has started to develop. The co-researchers strived to support and encourage learners to understand that they could control actions independently, e.g., have free choice, a public voice, and the ability to make a difference in their lives or others' lives. They strived to provide spaces where people can explore, experiment, and create content that is meaningful to them. Jeff Watson, for example, shared his

enthusiasm about how students who jumped right into the game-space he developed and, working collaboratively started creating their own projects. Some very strong projects had emerged. He reflected:

> These kids wanted to start "making" right away and a lot of them had really great talents. They were able to share these talents with each other and this sort of gave them an environment too, to play in. A space where they could really play and that for me is what I am most interested in: creating with these kinds of games as a place where people can meaningfully play.

Lance Weiler also has a genuine interest in creating spaces for people where they may have the opportunity to develop agency. He said:

> I am more and more interested in the idea of an experience. And this idea that challenges the notion of authorship and ownership and create these environments where people feel like they have agency. And some of that borrows from play and some of that borrows from design thinking. And some of it just borrows from, you know, this idea to experience design…a lot of my interests I think stems from that ability to create those environments and then allow people to feel like they have agency within them.

From assisting learners to develop agency, to chaos and change, the step may seem like a ravine to fall into. However, among the co-researcher's many positive experiences there was a consensus that their role was one of being a disruptor, a change agent for learners, someone who would open the eyes and make the learner see the world from a different perspective and doing so by choice. This theme is therefore called disrupting catalyst.

Theme: Disrupting Catalyst

Failure and change are not necessarily negative, although when we encounter failure, it often leads to feelings of inadequacy. Dörner (1996) explained that failure is the result of setting poor goals. "If we do not formulate our goals well and understand the interactions between them, our performance will suffer" (Dörner, 1996, p. 70). Jonassen (1996) expressed that the "cause for underachievement in schools is lower expectations on the part of teachers, which reduces expectations of students and parents, which further erodes the expectations of teachers and the entire educational system" (p. 258). Students are often "saved" from frustration and failure when the teacher gives the students the answers rather than allowing the learner to reach the correct conclusion through problem-solving. The aspect to build in, or design frustration points has been used in game-design in the past to allow for development of adequate scaffolds and to inform teachers when students are expected to struggle (Warren, 2006). Co-researcher Daniel Curry-Corcoran takes the approach that students need some healthy frustration that may lead them to think deeper, aim toward goals, and entertain collaborative efforts that can improve or correct the path to success.

> I like the whole idea of disruptive technology, whether it's *Facebook* or *Twitter*, any of these things that kind of disrupt the norm. We've been able to go out into schools and develop activities for students that are independent, are process-based, where students are actually applying what they learned, and it's this idea that they are, in effect, on their own or they're playing a role, they are a, say geologist. And so when they come to me and say, "I don't know what to do," I say, "Well, I've never been a geologist, I have no idea." And, you know, they get terribly frustrated… So giving students some time to be frustrated, it kind of kicks their imagination like when they're playing a video game.

> When, you know, I'm thinking of Mario Kart or something like that where they keep falling off the ramp. The only way to cross the ramp is to keep pushing the button… This idea of finally watching a kid get to the level of frustration where he's about to quit, and then you can raise your hand and say, "Where are my other geologists in the room?" And now he's got a small group, now we have a self-organizing system over here where students are working with students, right?

Matt Crosslin reflected on the importance and the difficulty of providing learners the right amount of assistance in large enrollment courses such as massive online open courses (MOOCs) for the best possible learning. Because new learning ultimately builds on previous learning (Ruddell, 1996) and it is nearly impossible to gauge what a learner in a crowd sourced learning space such as a MOOC already knows, Crosslin suggested layered learning environments. Learners all are in the same course, however, they self-assess their level of readiness, then place themselves in the appropriate learning group to receive or give more or less support, as needed. Crosslin said:

> But courses are essentially hitting on layers. Several levels of people, maybe some people have some experience, some are new, some are very advanced. Trying to pull them together… I think that would make a good use of this approach or especially if you have a course that is going to have a mix of beginner and experienced people. I think that this would work well with any kind of topic. This approach could be very helpful because it could keep the more experienced learner from being bored. When basic constructivist stuff is going on, they can keep the new people from becoming too overwhelmed. A little bit of pressure and chaos and… but you still don't want to overwhelm people so that they give up.

The use of chaos here is not to be mistaken for the technical term; rather it relays the idea of an unstructured, messy, and complex problem-space, allowing students to develop a more systemic thinking and making room for serendipity.

Just as choice can be seen as a part of the inviting and supporting & encouraging theme, choice can also be seen as an unsettling disruptor. Warren and Wakefield (2016) noted that when asked to contribute or choose in the learning environment, students may "become rebellious or angry" (p. 44). They added: "if students are trained to be passive and comfortable with a teacher's transmission of knowledge, locus of control and related affective problems emerge…why should they be discomforted by abstraction and uncertainty?" (p. 44).

Within the disrupting theme, we noted that co-researchers saw themselves as change agents and disruptors by using methods different from the mainstream-learning lecture format. The co-researchers shared their lived stories of how they create chaos in learners' lives, give learners decision making power (knowing choice can be hard to deal with), and allow learners to fail so that they can pick themselves up and move forward on their own. The co-researchers want to make learners feel a bit uncomfortable, toss them out of their comfort zone to awaken new awareness and foster agency development by initiating problem-solving.

Theme: Connection-making

The last theme is connection-making and includes the meaning units of collaboration, interdisciplinary connections, real-world issues, and new ideas. All co-researchers mentioned that they have students engage in collaborative work to make connections. Collaboration is a pedagogy that has its roots in social constructivism and is an important part of learning, as it helps learners to avoid becoming too dependent on the teacher (Barkley, Cross, & Major, 2005). "Collaborative effort helps learners achieve a deeper level of knowledge generation while

moving from independence to interdependence" (Palloff & Pratt, 2007, p. 157) and is often used in higher education where learners are expected to be more autonomous. In mainstream American classrooms, Bennett (2011) explained, competition and individual work is fostered. This pedagogy may be disadvantageous to in particular high-context culture learners, whom Edward Hall (1981) identified as preferring working together—collaborating.

Kohn (1993) explained how competition punishes students when it sets "people against each other" (p. 55) as when there is only one winner. Such a system is one of rivalry. It destroys relationships, Kohn wrote. On the other hand, competition as in team play, classroom against classroom competitions, or the use of games may work well as no single individual is being exposed or singled out, for example, in team games such as ARGs where effort and collaboration are aimed toward moving the game forward or toward a greater cause.

Co-researcher Lance Weiler mentioned that, as an example of experiential learning, he had students "come outside and see a rope dangling from the sky and they see balloons and a box attached to it. They have to lower the rope to bring down the box and then they realize that they need to collaborate in order to open the box." Daniel Curry-Corcoran said "we construct meaning as we go and getting the input, there is probably no single individual truth out there, as we all come to the table with our own background. So, we have to collaborate and work together if we're going to push the ball forward…" Scott Warren noted how students sometimes have difficulty with collaboration:

> The more mature students really start to see the value of actually having to practice [collaboration] and connecting it to their future work, or their current work. We do have a bunch of undergraduates that are non-traditional students who could really see how interacting with a fictional client that responds in ways that, say a boss or an outside

> client, would respond. How learning to deal with those problems, learning to collaborate, learning to work together in ways that produce something useful…they really see that; whereas, a lot of the other students, they just want it over with.

Initiating collaboration can be problematic as Warren pointed out. Culture may also impact on willingness to collaborate and the way we communicate. Bennett (2011) noted such cultural differences between low-context and high-context cultures[17] based on Hall's (1981) writing. Bennett felt we have to be culturally aware of our students so that we do not become biased toward them when they do not all act the same way.

Co-researcher Karine Halpern expressed another related concern: transmedia content created by the instructor may be less successful than transmedia stories generated by students in teams. She said:

> You have to engage the students. You have to have a team. It is about the group dynamics. It is like when you do sports with the students. When they play a ball game it is the same thing: It is both group dynamic as they are playing together, talking to each other, so now if they can co-create and the TS is a result instead a reason [that is better] because if they [teachers] use transmedia storytelling it is difficult to engage the students; however, if the students create their own story themselves it is more appropriate, but still there is a lot of work to be done for community building and making sure that they have the right tools.

Co-researcher Scott Warren reflected on his use of stories as a bridge for students to make connections by saying, "I like to teach through stories. It helps people make connections

[17] Low-context cultures are often identified as countries such as "United States, Germany, and Scandinavia and High-context cultures are East Asian Arab, southern European, Native American, Mexican and portions of the rural United States" (Bennet, 2011, p. 44).

and engage in transfer because they can connect my stories to their stories more easily than if I just give decontextualized information." Relevance and personal utility makes learning meaningful (Driscoll, 2000) and allows for connections to be made between the learning outcomes and the real-world usefulness.

Co-researcher Jeff Watson shared how students at University of Southern California found that collaboration and competition could be combined. He had students in an ARG create games and videos; they poured their energy and creativity into these projects to compete with each other. Students made connections at personal, academic, and professional levels. They received cards with prompts to use for the basis of their creative work and soon found that with more cards, they could handle larger and more creative projects. As a result, students connected with other players and collaborated on strategies to win over other teams in weekly design competitions. Watson explained that in addition to winning over their peers students also competed to gain experience, and made connections in their chosen field:

> Students really wanted to win, and every week the leaderboard was reset so every week was one game. The top four players at the end of that week would be connected with an experience that they wouldn't otherwise be able to have. And often because this is the school of Cinematic Arts and we are in Los Angeles, often those experiences are really exciting, fun, and interesting. You know, for example some of the students got to go meet *Robert Zemeckis*, you know the Director of *Forrest Gump*. They got to go to his house and have dinner with him.

Keller (1987) argued that "people enjoy more about things they already believe in or are more interested in" (p. 4) which is also the starting point for co-researcher John Gosney. He

attempts to bring out the critical reader in his students, relate instruction to their lives, and inspire them to make valuable connections. He said:

> So, a primary goal of mine, perhaps the primary goal is to use this, again what I think probably is inherently interesting information or subject matter for these students, as a way in, to get them, to teach them how to be more critical readers. To look for connections between the kinds of material we are reading… not the subject matter per se, but the methodology that we use to analyze the material and how they can apply that to their own majors, in other coursework.

"Whatever belongs to the essence of the individual," Husserl (1962) argued, "can also belong to another individual" (p. 47). From analysis of the eleven individual and composite textural descriptions emerged the six themes presented above. From these themes and situated within the lived experiences of co-researchers can be found "the unified statement of the essence of the experience of the phenomenon as a whole" (Moustakas, 1994, p. 100); the composite textural and structural experience that belongs to the group.

The Essence of the Experience

Van Manen (2014) explained that the eidetic reduction is the synthesis and describes the *eidos*—the form or idea—"the internal meanings structures, of lived experience. A universal or essence may only be intuited or grasped through a study of the particulars or instances as they are encountered in lived experience" (p. 229). Reduction includes a synthesis of findings from the structural and composite structural descriptions. The researcher fixes her attention, without making judgments about the objects being in the world, purely focuses on the objects in the

mind. She describes these things in a systematic way to arrive at the very essence. “Things” here mean whatever appears in consciousness—the fundamentals.

> The phenomenological eidos of a phenomenon or event, such as being a traveler… has been adequately described if the description reawakens, evokes, or shows us reflectively the lived meaning and significance of the prereflective (*sic*) experience of travel, in a fuller or deeper manner” (van Manen, 2014, p. 229).

The primary research question in this study was: “What is teaching with alternate reality games (ARG) and transmedia storytelling (TS) for instructors and instructional designers and how does this reveal itself? Through an active discourse initially among the researcher and the two peer reviewers, the researcher and the co-researchers, and from the summary stories and themes, later again discussed and agreed upon between the researcher and the peer reviewers, emerged the essence of being a “lifeworld learning coach—*Sensei*,” who freely shares knowledge and supports learners (Figure 7). Sensei is a Japanese word for teacher—but not just any teacher. It is a teacher who shares and transfers his or her knowledge for the true benefit of the learner, truly instilling the love for learning. The Learning coach—sensei uses innovative learning designs, guides the learner toward enhancing their own understanding by their own effort, and guides learners in their learning pursuits in ways that will impact their lifeworld as well as that of others.

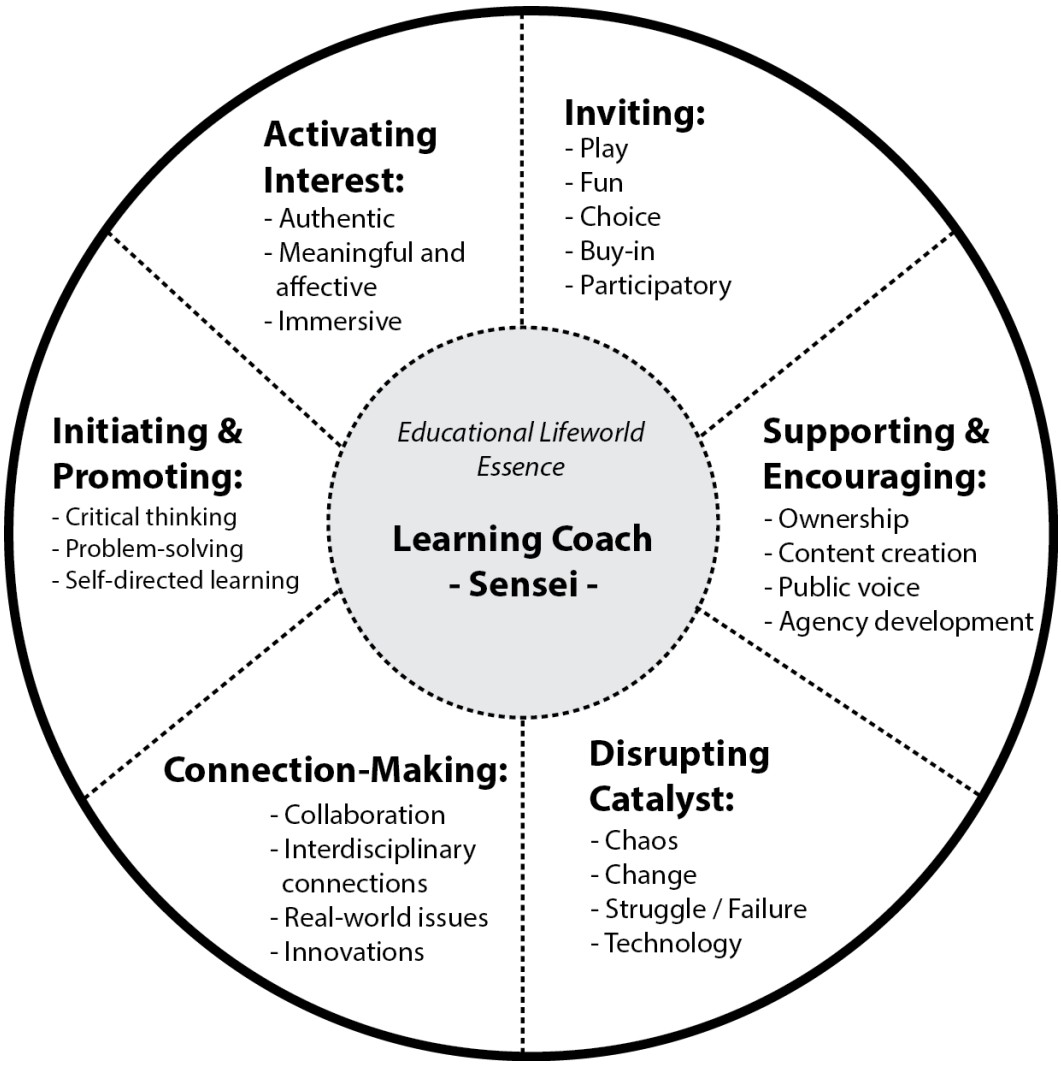

Figure 7. Depiction of the six fluid themes that emerged in the analysis of instructor and instructional designer lived experiences in teaching with alternate reality games and transmedia storytelling. The essence of the lifeworld experience is the co-researcher as "Learning Coach—Sensei."

As noted earlier, MacIntyre (2007) argues that humans reach reason and intelligibility though narratives shared by culture, environment, and tradition and that within traditions thoughts and discussions take place to shape this tradition. Within the tradition of educational ARGs and TS, there is a social arrangement of instructional designers and instructors who function as disrupting catalysts and change agents. Transmedia narratives and games, and layered instruction are the products of this tradition to promote learning though many means.

"Mentors are builders, nurturers, and guides who invest in humanity" (Moerer-Urdahl & Creswell, 2004, p. 20). Through the analysis the co-researchers emerged as innovators and teaching mentors, difference-makers in the lives of their learners. Figure 8 visualizes the lifeworld essence of the co-researchers based upon the summary stories derived from STEM words. The "what" of the experience of teaching with game-like narratives is to be this disruptive catalyst and change agent; deeply concerned with student learning that often takes place through game-like narratives including real-world learning, problem-solving, and critical thinking activities. The essence of the experience revealed itself to be a "Learning Coach"— the Sensei. The learning coaches see themselves as instructors and innovators who engage and enlighten learners, provide opportunities to become aware of real-world issues, help learners see connections between interdisciplinary topics, and develop personal agency. The learning coach (sensei) acts as a change agent to encourage and support students to create, explore, play, and build personal agency.

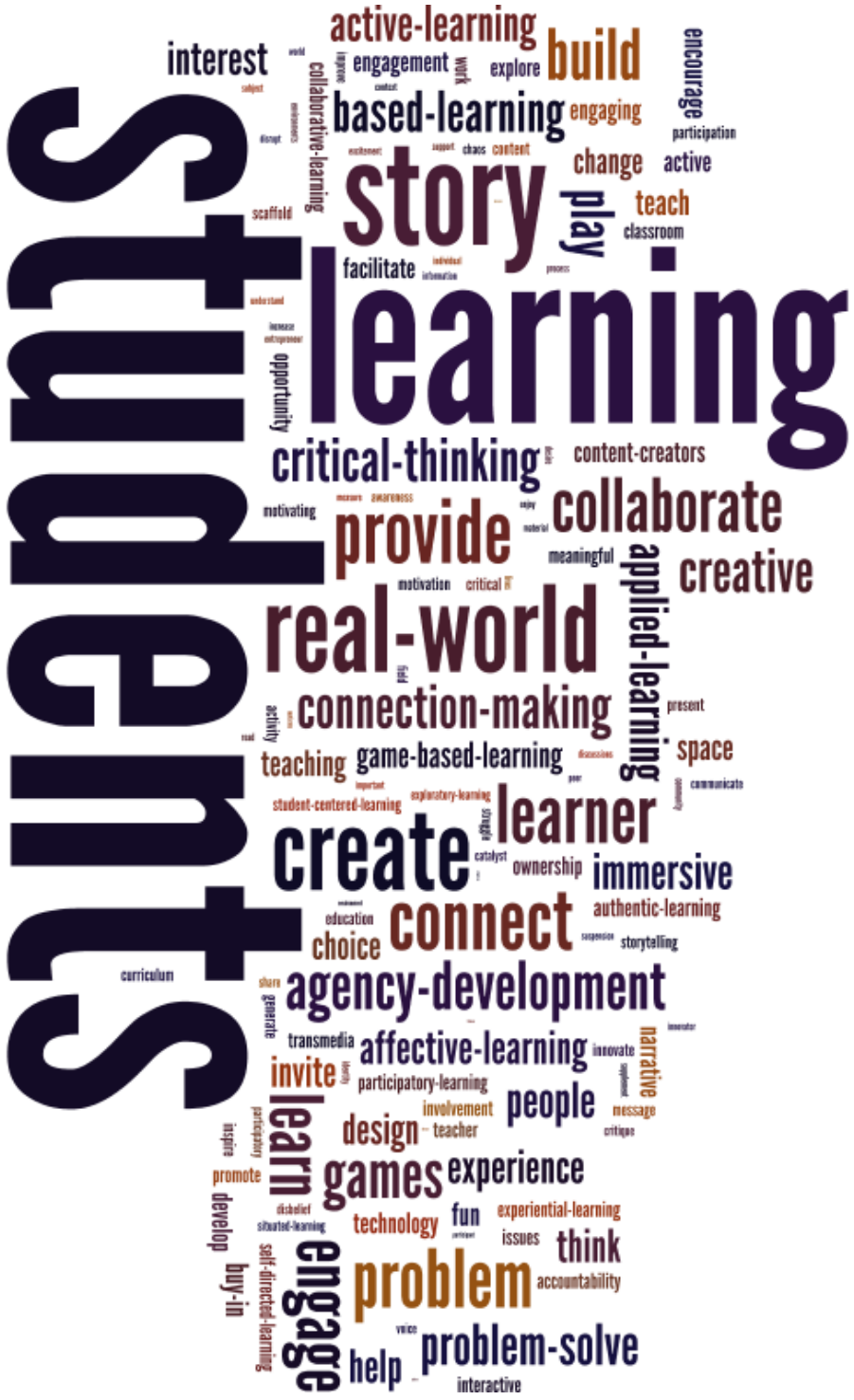

Figure 8 Visual depiction of the lifeworld essence of the "Learning Coach—Sensei."

Summary

This chapter shared the interpretation of data from the study of co-researchers' lived experiences using alternate reality games and transmedia storytelling, that is, game-like narratives, for teaching and learning purposes. The chapter began with a brief review of the research goals and methods, and then introduced the co-researchers, consisting of nine men and two women from various locations in the United States and in Europe.

This was followed by an explanation of how phenomenology (described in chapter 3) was used before and during the analysis phase. This systematic process included the *epoché*, reduction, individual and composite textural descriptions, themes and meaning units, imaginary variations, and the individual and composite structural descriptions that lead to the essence of the experience.

The chapter ended with the answer to the question "What is teaching with alternate reality games and transmedia storytelling for instructors and instructional designers and how does this reveal itself?" Based on the interviews and as interpreted by the two peer reviewers and me during the analysis, and derived from the themes, the essence of the experience is being a lifeworld learning coach—sensei who freely shares knowledge and supports learners. A "learning coach—sensei" is a disruptive catalyst who allows learners to create, explore, play, have voice in society, and build agency. This sensei of teaching and learning with game-like narratives engages and enlightens the learner, provides the learners with opportunities to make connections in the real-world, and encourages learners to take steps to make a difference in their own lifeworld as well as that of others.

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CHAPTER 5 - REFLECTION

Introduction

This phenomenology research examined the essence of the experience of my co-researchers. The process to arrive at the lived experience was one of reflection, questioning, seeking, and dialoguing—all of which gave the essence of the lifeworld of the co-researchers. The main research question sought to gain insight into the culture and tradition of both formal and informal teaching with alternate reality games and transmedia storytelling.

Before bringing this study to a close, it is important to again reflect on my research and reasoning for undertaking this study on co-researchers lived experiences. I will briefly share a review of the findings from my main research question, answer the additional research questions posed in this study, share implications from what I found, and additionally suggest a few ideas for future studies.

Researcher Curiosity

A phenomenological research study is driven by the curiosity of the researcher. My curiosity was one inspired by my research question. I had noticed that educators were beginning to use alternate reality games and transmedia storytelling to educate in both formal and informal environments. I was curious as to what this experience might be like for instructional designers and instructors and how this experience might reveal itself. What is their experience and how does it reveal itself? Alternate reality games are large-scale, immersive, complex ventures that require team effort and problem-solving. The game does not begin as a fixed, designed story with a beginning and an end. Instead, the game emerges as players share their voices as to the direction the game might take. Transmedia storytelling is a narrative that spans various media

with a central, pre-designed, but evolutionary narrative that holds the story together and responds to those interacting with it. For participants who want to fully immerse themselves, additional content is available across media such as *Facebook*, *YouTube*, and in comic books, and real-world meet-ups. It is there where story characters, participant-created characters, and partakers in dialogue and additional branches—different from the central narrative—provide avenues to participate and have voice and agency in the story.

Summary of the Study

Uniqueness

At the beginning of a study, it is important to ensure that the question you are about to pursue is not a duplication of research already conducted. I explored the literature and was unable to find previous phenomenological research on lived experiences of co-researchers who used game-like narratives in their work. In our field of instructional design, phenomenology as a research method was sparsely used. Alternate reality games (ARG) and transmedia storytelling (TS) are fairly new occurrences within informal and formal environments and are still in their infancy. I found websites and game designers' reflections on their own implementations of using ARGs and TS, in book chapters, and some journal articles; however, I did not find another study that looked at the essence of the lived experience of a group of instructors and instructional designers who had used these game-like narratives and techniques for teaching and learning. Knowing this, I offer that my phenomenology study is unique, conferring the co-researchers' voices brought forth in a thick description of the essence sharing the co-researcher's own voices.

Review of research finding—essence

The essence of the co-researchers experience is that of a lifeworld *learning coach-sensei* who becomes a catalyst for change, freely sharing knowledge and supporting learners. A "learning coach-sensei" allows a learner to create, explore, play, have voice in society, and build agency. The *sensei* is one who uses game-like narratives for teaching and learning, engages and enlightens the learner, and provides opportunities for learners to make connections with the world through many different learning strategies (see Figure 8). This person encourages learners to take steps toward making a difference for themselves, for other people, or in the world.

Findings from Additional Research Questions

In this research, not only the essence of the co-researcher's experiences was sought, but it was also believed that from the interviews it would be possible to extract answers to design-related questions. These questions were posed in addition to the main research question and allowed me, as an instructional designer, to learn broadly from the co-researchers how their game elements and narratives were designed and implemented to foster learning and what learning theories and strategies were used.

Additional Research Question 1

"What is it that makes the cross-media learning experience different from traditional pedagogical pursuits?"

While the classic American mainstream mode in the educational classroom is one where the teacher lectures and the students passively listen (Bennett, 2011) and where student are mainly required to memorize, some teachers try moving away from this model. Ruddell (1996),

for example, suggested three ways for teachers to build participation and peak student interest: (1) building on prior knowledge through "engaging them in intellectually rich activities that require problem-solving, language interactions, and active participation" (p. 97), (2) present materials that the learner can identify with, and (3) present materials that may provide learners a "hook" to catch their attention. Because the teacher can only do so much, students must want to learn independently. Self-directed learning requires personal discipline (Bandura, 1997); therefore, learners need to add personal effort for the learning to take place.

Reviewing the approaches the co-researchers in this study took, their shared experiences indicated through the themes that they had moved away from the mainstream lecture model. The co-researchers belong to a tradition where the instructor is caring and awakens curiosity in the learner using games and narratives to peek interest to inspire learners to think for themselves and engage in problem-solving. Based on the themes, the co-researchers want to initiate and promote learning, to activate interest in learners and invite them to participate. It's a welcoming that the lecture learning environment cannot compare with. The co-researchers want to encourage and support learners, but what more, they also want to disrupt learners. Shake them up a bit. They want to let learners fail and struggle while they at the same time are there to help them get back on their feet if needed, but not because they can easily do so by, for example, sharing. Instead, they use disruption to help students help themselves to get back on their feet. Struggle and failure are not necessarily bad. As noted earlier, when being in a good mood and failing a task it may be easier to give the task another go and succeed. With caring instructors who want to engage their learners success is closer.

Chris Aviles, for example, focuses on engaging and motivating students to put in extra effort. He feels that a teacher should help students connect the materials across subjects and that

ARGs blend boundaries to give a flowing experience which allows students to connect their learning. He said,

> The problem with school is that we have these buckets. I go to art class, then I go to math class, then I go to English class…and the kids don't see how that is connected. What I love about alternate reality games…is that it takes it all and blends it together in a learning experience. And that's what I think the future of education needs to be — experiential.

In a similar vein, Lance Weiler spoke about using storytelling to help students engage, learn, and take ownership of their learning through active and affective learning. He noted also how stories help us connect with a past that we may have forgotten or been told to leave behind, and that this process of playing and using stories allows us to learn both through a process of pulling from both previous experience and new ones:

> There is this desire for pattern recognition in certain types of stories and in a way they are [almost] in our DNA. There is a childlike sensibility that gets lost as we get older, as does our ability to play and mash things creative…in some cases we just have the ability beaten out of us by a process that leaves us kind of reeling. Or, we lose touch with that spark that was originally there. And so I think play is a way to bring playfulness in—a way to rekindle that, and story is a way to connect us. Both together [play and story] can be a very powerful way to help somebody really retain or understand something because they are either "doing it," or they are "retelling it," or they are "making it their own" and embellishing it.

For Patrick O'Shea, intentionality means involving students in generating exploratory, active, playful, and affective learning. He leverages motivation through engagement, believing connection-making with content and discussions to be highly important because connection-making is needed for us to learn. He explained:

> I think of life as a series of stories that we go through. Some are exciting, some are not, and it's very rare that all you're doing is math, or all you're doing is reading. You're doing math because it's part of a larger story. My story of paying the bills this month—I need math in order to balance my checkbook. But that's the key. You may be planning a trip. You need math in order to budget for it, but you also need geography skills to know meaningfully how long, how far you can go in a six-hour drive. You can build in a scientific element to it, talking about it as a nature trip. And so,— you're going out to observe wildlife in its natural habitat and you've got journaling process because you were writing all of your field notes down. And so, you're making the connections between the content areas in a meaningful way. And I think that's the thing that's missing. We have fifty minutes of math**.** During that fifty minutes all we focus on is math. And we don't connect it to other things. And if there's one thing I truly believe about education, it's that we learn—long-term learning is the result of making connections between disparate pieces of information. It gives you that hook that you can remember two or more pieces of information on. If you don't have that hook, then those pieces of information are just going to float away.

For O'Shea, stories effectively facilitate such learning.

Along a similar line, Jeff Watson expressed his belief that learning occurs best when students engage actively with the content and are excited about what they are doing. He thought about games in more general terms when he shared how play helps to engage learners:

> I think that all learning is a kind of playing to begin with…why do we have this instinct to play? Certainly it seems like the reason why many mammals play, at a very basic level, is to learn about the world…learn how to do things, how to become better at things. When you just play around with something, you get this experience, this embodied learning of what that thing are. Playing with fire teaches you that fire is dangerous. That it can hurt. So, it makes sense. I think, good education, good teachers, have always been figuring out ways to get their students playing…because, then that means that the students are engaged and they care about [learning]…If coercion is the main method of your teaching practice, then you are doing something wrong…[because] games are "do-media." They communicate by what the player does in playing…and that is how a game really teaches us.

Using technologies and innovative ideas to foster learning, incorporating problem-solving and critical thinking activities, the co-researchers hope to guide learners toward exercising control over their own learning. These four co-researchers voices articulated how stories and games assist with learning and make learning with game-like narrative more engaging and fun. They felt that games and play more easily become part of existing learning and therefore are superior to traditional pedagogical pursuits.

Additional Research Question 2

"What are the learning theories/strategies that guide alternate reality games and transmedia storytelling experiences?"

The second additional question explores the learning theories and strategies that were used during the co-researchers' process of designing transmedia narratives, games, and immersive play experiences. The answer to this question was derived from an analysis of the transcripts during peer review and then compiled and illustrated in Figure 9, presented on the following page.

Co-researchers culled ideas from a large number of available theories and strategies. Most frequently, problem-based learning was evident, as they regularly returned to exploring problems to spur individual and group critical thinking skills. Collaborative learning was also important, as was situated learning, and making learning authentic. A common thread throughout all the theories is that at their roots, they relate back to constructivism and constructionism world views. We shall review these theories and strategies next to better understand them.

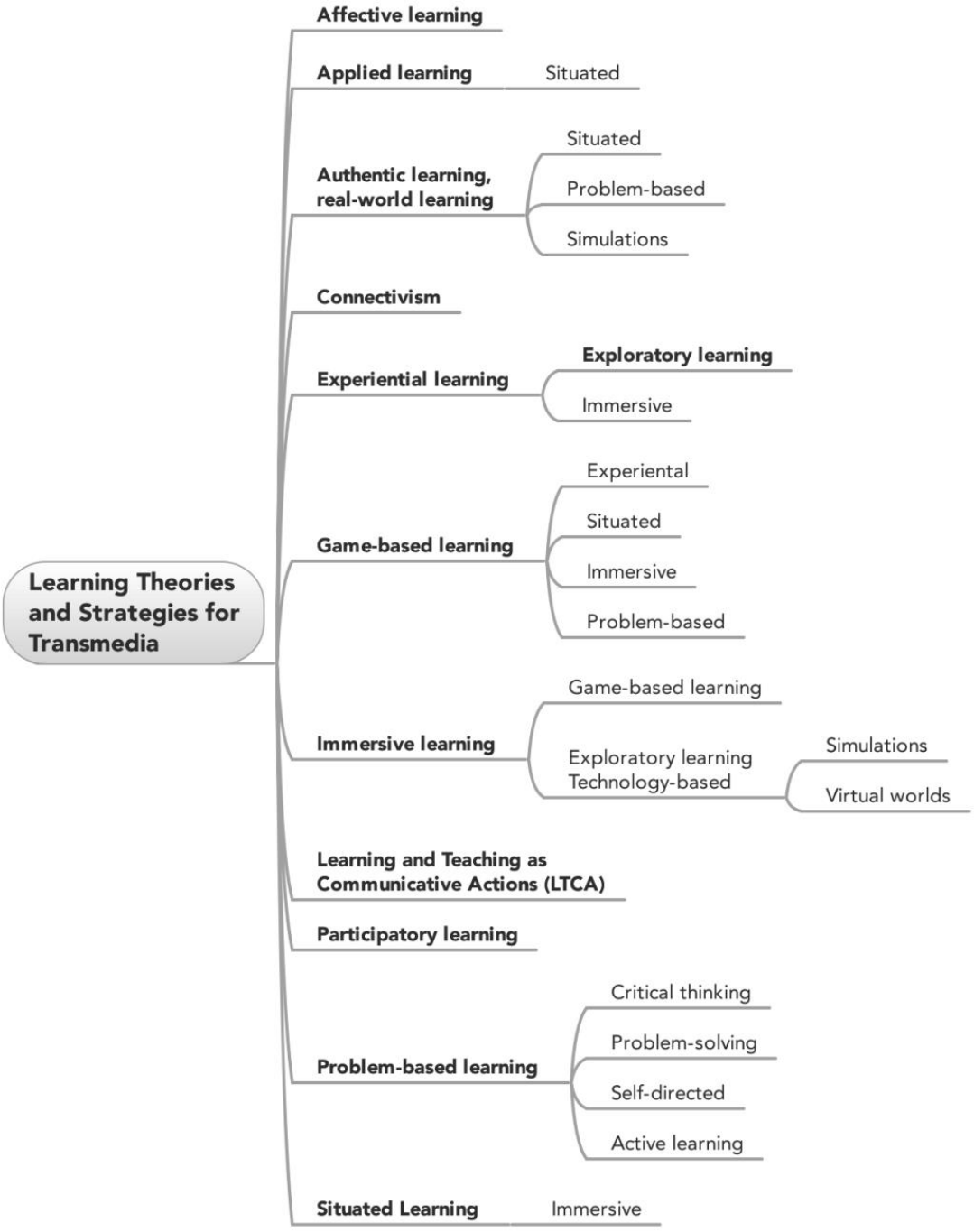

Figure 9. Learning theories and strategies used by co-researchers in this study.

Constructivism and Constructionism

Alternate reality games are complex and require team effort. Players seek planted clues which require teams to solve the larger, posed problem through collaborative means before continuing through the game. Transmedia storytelling does not necessarily require team effort; however, the experience is said to be more enhanced when shared as a group. In both cases, when using ARGs and transmedia storytelling for learning, learners tend to engage in the constructivism approach of generating knowledge and meaning as they go. Constructivism is practiced by researchers and educators in various fields; it was introduced during the 1980s in the field of Philosophy of Science and Technology and then in Philosophy of Educational Technology in 1990. This epistemological theory has been traced to the eighteenth century Rousseau (Mandle, 1997) and Kant (Phillips, 1995). Others credit the theory to Jean Piaget (Bruckman, 2004; Driscoll, 2000).

Duffy and Cunningham (1996) posited that *constructivism* is a general term for a wide range of views. Differences stem from worldviews, and as these authors expressed it, the term has generally come to indicate instructor-teaching methods that support learner knowledge acquisition and active construction of knowledge by the *individual*, as opposed to direct instruction, which is teacher-lead and mainly requires student memorization. Instruction in the constructivism sense is about "nurturing the ongoing processes whereby learners ordinarily and naturally come to understand the world in which they live" (Knuth & Cunningham, 1993, p. 164), with the instructor being a guide at the side rather than the sage on the stage.

A main objective of constructivism, as Savery and Duffy (1996) emphasized, is to understand how we interact with our environment when solving problems and gaining knowledge. They noted that learning must be grounded in real problems situated within the

content domain. Such problem-based learning is authentic, situated learning/cognition, and anchored in the real world, providing more incentive for students to learn (Brown, Collins, & Duguid, 1989; Driscoll, 2000; Herrington, Reeves, & Oliver, 2007; Jonassen, 2011; Lave & Wenger, 1991; Snowman & McCown, 2015; Woolfolk, 2008). Based on the literature, many game designers use a constructivist framework to focus on problem-based strategies.

The classroom design of the alternate reality game called *The Door* by Warren, Dondlinger, McLeod, and Bigenho (2011) was built around problem-based learning (PBL) because PBL is "known for enhancing critical thinking and engagement" (p. 398), "improving post-secondary learning experiences by providing authentic contexts for learning" (p. 399), and for "compelling students to engage in story driven, problem-centered tasks" (p. 399). It was also noted that learning designed with intertwined problems carries weight in a learning ARG. PBL is one of several constructivist frameworks.

Constructionism is very similar to constructivism, however, "the main assumption of constructionism is that the boundaries of social knowledge are set by discourses that categorise (*sic*) the world and bring phenomena into view" (Talja, Tuominen, & Savolainen, 2005, p. 89) making it more physical in the sense that discourse is heard, seen, and critiqued while constructivism focuses on the individual and his or her internal construction of concepts.

Below are explanations of the different theories and strategies that the co-researchers used in their designs.

Affective learning

Caring about the learner and his learning may lead to a rapport between the teacher and the learner and is also part of the affective taxonomy of objectives developed by Krathwohl, Bloom, and Masis in 1964. The objectives in the affective domain concern attitudes that students

are expected to develop as a result of instruction" (Gunter, Estes, & Schwab, 1999, p. 32) and are an important part of learning. Picard, et al. (2004) shared how affect in learning has a role in "motivation, emotion, interest, and attention" (p. 253) and how learning is closely "intertwined with thinking, and performing important functions with respect to guiding rational behaviour (*sic*), memory retrieval, decision-making, [and] creativity" (p. 253). Emotions, Robert Plutchick (2001) noted, are "an essential part of who we are and how we survive" (p. 344).

In their review of research on affective learning, Picard et al. (2004) reported that even small mood changes toward the positive help to induce "a different kind of thinking, characterized by a tendency toward greater creativity and flexibility in problem solving, as well as more efficiency and thoroughness in decision making" (p. 254). Though hard to measure, impact from affective learning is obvious; being interested and engaged when making a mistake, for example, "can be important for facilitating learning and exploration" (p. 255); however, when being in a sulky and unfocused mood, making a mistake can be discouraging for a learner (Picard, et al., 2004).

Applied learning

Applied learning is a student–centered approach. It allows educators to contextualize learning and teach in a way that assists learning development in preparation to apply their learning to the real world; e.g., for future employment (Harrison, 2006). It is closely related to authentic learning which uses real or pseudo-real problems to allow students to make connections between interdisciplinary areas. Applied learning includes "problem solving, communication, skills in accessing and using information, how to be self-managing, and how to work with other people."[18]

[18] http://schools.nyc.gov/offices/teachlearn/documents/standards/applied/preface/8whatis.html (paragraph 3).

Authentic learning / real-world learning

Jonassen (2011) emphasized the importance of embedding authentic problems in learning to make learning more relevant and mentioned two types of authenticity: simulations and authentic settings. Herrington, Reeves, and Oliver (2007, p. 8) extracted ten characteristics of authentic activities for learning (c.f. Herrington, Reeves, Oliver, & Woo, 2004):

Authentic activities:

- Have real-world relevance
- Are ill-defined, requiring students to define the task and sub-task needed to complete the activity
- Comprise complex tasks to be investigated by students over a sustained period of time
- Provide the opportunity for students to examine the task from different perspectives, using a variety of resources
- Provide the opportunity to collaborate
- Provide the opportunity to reflect
- Can be integrated and applied across different subject areas and lead beyond domain-specific outcomes
- Are seamlessly integrated with assessment
- Create polished products valuable in their own right rather than as preparation for something else
- Allow competing solutions and diversity of outcomes.

Connectivism learning

In 2004 George Siemens noted that the three broad learning theories most often used in education were behaviorism, cognitivism, and constructivism. In his research of learning theories, he found that these theories do not adequately align with our technology-rich society and do not adequately support technology-enhanced learning. Siemens suggested that much has changed in our world with the ubiquitous technology of today; contrary to the past, learning is now a continuous process—both formal and informal—taking place in communities of practice[19] and with technology that is completely "altering…our brains…and define and shape our thinking" (Siemens, 2004, December 12). Siemens' and Stephen Downes' theory of connectivism is "driven by the understanding that decisions are based on rapidly altering foundations" (Siemens, 2004, December 12, paragraph 23) or situations outside ourselves—a sort of pattern recognition sought by the learner.

In this model, learning is a process where we generate and grow connections (both relationships and nodes for further connection-making) and increase our knowledge through decision making such as choosing what to learn and what makes sense given any situation in an ever-altering society. "Knowing where to find information is more important than knowing information…[and] learning happens…[through] courses, email, communities, conversations, web searches, email lists, reading blogs, etc." (connectivism.ca). Duke, Harper, and Johnston argue that connectivism, rather than being a learning theory, is "a tool to be used in the learning process for instruction or curriculum" (Duke, Harper, & Johnson, 2013, p. 10).

Experiential Learning

With roots in theories by Dewey, Lewin, Piaget, James, Jung, and other 20th century scholars (Kolb & Kolb, 2005), experimental learning (ELT) developed in the 1960s through a

[19] See Lave & Wenger (1991) pp. 98-100.

call for learning by students that is "relevant, applicable, and closely connected to their values" (Mann, 2006, p. 279). As a result, teachers started teaching with more close to "real-world" techniques. Kolb & Kolb (2005) noted experiential learning is a theory based on six propositions (p. 194):

1. Learning is best conceived as a process, not in terms of outcomes
2. All learning is relearning
3. Learning requires the resolutions of conflicts between dialectically opposed modes of adaption to the world
4. Learning is a holistic process of adaption to the world
5. Learning results from synergistic transactions between the person and the environment
6. Learning is a process of creating knowledge.

Kolb & Kolb shared that the immediate focus with experiential learning is through "engaging students in a process that best enhances their learning—a process that includes feedback on the effectiveness of their learning efforts" (p. 194) and allows them to transform through the experience (Kolb, 1984).

ELT is a constructivist theory (Kolb & Kolb, 2005); however, it takes a somewhat different approach to construction of learning than other such theories in that the instructor is a minimal part of the learning process and learning is defined as a transforming experience for the learner. The model builds heavily on experience and discovery in a social setting, reflective observation, abstract conceptualization, and active experimentation (Kolb & Kolb, 2008).

Exploratory learning

Exploratory learning builds on the constructivist theory and is considered open-ended, allowing learners to freely investigate and examine environments, follow their own interests, and

to make connections in this way. Learner interactions with the environment are common and exploration allows learners the opportunities to customize their own learning (de Freitas & Neumann, 2009). Mentioned in research articles as an extension of Kolb's experiential learning, exploratory learning is often used with 3-D environments such as games, simulations, and virtual worlds but also with social and participatory tools (de Freitas & Neumann, 2009) and hypertext. de Freitas and Neumann (2009) explained the strategy as "choreographed to support peer interactions and exchanges" (p. 343).

Game-based learning

The goal of game-based learning is learning and behavior change according to Connolly, Boyle, MacArthur, Hainey, and Boyle (2012). A number of different types of games may be used as educational games, such as action games, adventure games, role-playing games, simulations, strategy games, and more recently, virtual worlds and ARGs. Games for learning allow for immersion and affect according to Boyle, Connolly, and Hainey (2011) who further noted:

> Learning in games provides activities which support learning that is active, experiential, situated, problem based, provides immediate feedback, is consistent with cognitive theory and involves communities of practice which provide collaborative support to players as they learn. Learning with computer games is consistent with constructivist theories of learning which emphasise (*sic*) learning as an active process in which learners construct new ideas or concepts based upon their current/past knowledge and where learning is individualized (*sic*) according to characteristics of the player" (paragraph 27).

In addition, Plass, Homer, and Kinzer (2015) suggested that games can be seen not only from a cognitive perspective but also from a sociocultural perspective where "rich contextual

information and interactions [occur and that these are] needed for learning in the 21st century" (p. 259). The use of games for learning is built on the idea that they foster learning by means of motivation, engagement, fun, and play. Plass et al. also noted one additional argument for using games for learning which has been mentioned in research by several other researchers,[20] mainly that game-based learning "allows for graceful failure: Rather than describing it as an undesirable outcome, failure is by design and expected and sometimes even [a] necessary step in the learning process" (p. 261). This idea that failure can to act as a change agent in learning is also one of the co-researchers in this study and can be found under the disruptive catalyst theme.

Immersive learning

Gartner (2016) explained immersive learning environments as situational. These environments are built using technologies and software and allow for simulations of "realistic scenarios and environments that give learners the opportunity to practice skills and interact with other learners" (paragraph 1). Immersive learning, Gartner noted, includes game-based learning, simulations, and virtual worlds.

Learning and Teaching as Communicative Actions

See Chapter 3.

Participatory learning

Participatory learning is grounded in constructivist learning and with roots in "sociocultural theoretical perspectives" (Hedges & Cullen, 2012, p. 921). Participatory learning encourages learners to seek out new information and learning opportunities and to make connections between interdisciplinary content. Reilly, Vartabedian, Felt, and Jenkins (2012) published in a report to the Gates Foundation five core principles for participatory learning based on their

[20] Kapur (2008); Kapur & Bielaczyc (2012); Kapur & Kinzer (2009); Plass, Perlin, et al. (2010).

insights from collaboration with teachers in participatory classrooms in elementary and secondary school (p. 4):

- Participants have many chances to exercise creativity through diverse media, tools, and practices
- Participants adopt an ethos of co-learning, respecting each person's skills and knowledge
- Participants experience heightened motivation and engagement through meaningful play
- Activities feel relevant to the learners' identities and interests
- An integrated learning system—or learning ecosystem—honors rich connections between home, school, community and world.

Problem-based learning

Problem-based learning (PBL) is an instructional strategy that has as a goal to help learners "develop flexible knowledge that they can apply to problems" (Hmelo-Silver, 2013, p. 25). This strategy requires learners to learn as they solve problems. Jonassen (2011, p. 154) noted that PBL is:

- Problem-focused, where learners begin learning by addressing simulations of an authentic, ill-structured problem
- Student-centered, because faculty cannot dictate learning
- Self-directed, where students individually and collaboratively assume responsibility for generating learning issues and processes through self-assessment and peer assessment and access their own learning materials
- Self-reflective, where learners monitor their understanding and learn to adjust strategies for learning.

Jonassen (2011) noted that PBL usually involves groups of five to eight learners who come across and reason through a problem by call-up, hypothesizing, and discussing what they need to learn and who will problem solve for the group, for them to be able to move forward. PBL is thus self-directed; and in the process learners collect, study, and prepare reports or similar materials to use as evidence of learning (Jonassen, 2011). Learning is usually summarized and assimilated once a week.

Situated learning

Situated learning is a theory conceived by Lave and Wenger (1991). It builds on the idea of learning as a process integral to everyday learning (Handley, Clark, Finham, & Sturdy, 2007) where learning is seen to occur while working in a community of practice[21], socially building knowledge, collaborating, and communicating among participants (Jonassen, 2011). In situated learning, the learning is contextualized and highly participatory, i.e., "focused on becoming a fully participating member of that community" (Jonassen, 2011, p. 158) and "meaningful learning requires active and purposeful participation in a community that requires immersion in the activities of the community" (p. 158). Jonassen further observed that assessment of situated learning takes place by evaluating the learner's ability to participate within their given culture.

Additional Research Question 3

The third additional research question was a combination of two questions: "How does alternate reality games and/or transmedia content creation fit into the delivery of curriculum?" and "How does student engagement with content delivered over various media and platforms play into the classroom learning and the overall learning environment?"

[21] See Lave and Wenger, 1991, p. 98-100.

Co-researchers shared that they felt ARGs and transmedia could be used as powerful tools to carry curriculum and how students or participants became engaged, especially when they have say in the game or story development. The engagement—having some ownership and say—tended to make them more interested in learning. Scott Warren, for example, shared that students need to be challenged and deeply engaged in learning activities for them to understand how they best learn. He mentioned how non-traditional students were better at:

> …seeing how interacting with a fictional client that responds in ways, say, a boss or an outside client, would respond, how learning to deal with those problems—learning to collaborate, learning to work together, in ways that produce something useful—they really see that; whereas, a lot of students just want it over with.

When asked how he felt that the use of ARGs in the classroom affects his teaching, he said:

> It forces me to be very mindful about what I'm doing because, especially if you're running an ARG, you are on task all the time. You are constantly paying attention because you are building a story that emerges as a result of what the students communicate with you, the choices that they make, how they interact with the characters that you produced. It's a lot more work than some other teaching styles, but it also helps me know what they are learning, what they're not understanding, and it helps me to produce a better game each time it's taught because I know what didn't work the last time, and it forces me to try and come up with my own solutions to these problems.

When asked about what curriculum would be suitable for delivery over game-like narratives, John Gosney shared his perspective:

> I think the applicability of this approach to any discipline is really interesting and something to explore. Some folks now focus on the STEM discipline and particularly on this campus, and for good reasons. But I think this approach could be a wonderful bridge between arts and STEM…and working both ways for students who are coming from either area to see the advantages and benefits of the other.

Ken Eklund elaborated on the challenge of how education practices generally still tend to employ a mainstream "one-size-fits-all" model. However, he sees that using games and narratives are slowly changing this method as instructors are beginning to set learning in the real-world:

> We've had this one-size-fits-all educational solution for what—eighty years now? Somehow or another it's just really become ingrained that education should be this sort of one-size-fits-all, that we really want to build one factory and run everything through this one factory. And I think what's happening with the Internet when we get to transmedia [is] we're really talking about what's happening…we are realizing that we don't have to think that way anymore.

Ken further expanded that beyond the technology, the content increasingly lends itself to these new forms of instructional practice and models for learning with certain caveats, saying that

> …so, we look at certain subjects, there is no reason in the world why you could not use games to teach them. If you're teaching about systems, then you should be using a game because games are perfect system-educational experience tools. So, to really teach about systems like political system with textbooks… it's doomed to failure…basically, it's running on inertia only at this point in time. What happens [if you use game-like

> narratives] is you get people engaged in actual systems, actual political systems, and understanding that you derived from those systems, and the speed at which you derive it… really, really striking!

Supporting this idea of embedding instruction in narrative spaces, Rebecca Brown used herself as an example, expressing how storytelling engages learners:

> I think that storytelling is so important in everything we do. I think of all the subjects that I went through in school; if it had been a story would I had paid closer attention? You could have told me about the Greeks and Geometry. Would I have listened a little bit closer instead of memorizing theorems to know the rationales behind what I was doing? I think I would have been more engaged. And so, I can't think of a subject that would not benefit.

From the perspective of subject matter, Lance Weiler shared how he felt transmedia content creation fit into the delivery of curriculum, pointing to the power it has to shift perspectives:

> The thing that is most powerful about [using game-infused narratives], I think, is that it shifts a perspective. It allows you to look through a different lens. And the moment you look through a different lens, you can feel something that maybe you didn't realize was possible before. Or it can help you to see it from a different perspective; all of a sudden,—other things open to you that maybe were not possible before.

Reviewing the interviews and these statements, it is evident that the co-researchers were very close to the experiences they had developed as designers and instructors. Even with their stories, it was difficult to answer how student engagement with the content, delivered over

various media and platforms, play into the classroom learning and the overall environment. Matt Crosslin, for one, noted that they had gathered data and shared that:

> The student engagement aspect of it was very interesting because we received some very positive feedback and we also received some very negative feedback. I think, in both instances, they both are forms of engagement because the students are looking at things and thinking about it. One student said 'this is the worst MOOC I've ever been in.' How do you engage someone? You have to figure that out. Obviously some of the feedback was from people who just didn't like it and want to try something different but there was also very good feedback, both negative and positive.

He noted that this positive feedback related to their engagement with the MOOC as evidenced by their motivation to work outside it.

> As far as engagement goes, there was the social aspect side on sites like *Twitter* and *Facebook*—interesting that the Facebook group was started by a student. We didn't create one. They just wanted one to interact more so they started it.

This issue of the scope of the outcomes and difficulty of measuring engagement was clear in Ken Eklund's transmedia design experience. It was simply too large for the co-researcher to get a good picture of the engagement impact. He explained this in the context of his design of *Ed Zed Omega*[22], a transmedia storytelling experience he designed when working for Twin Cities Public television in St. Paul. At its heart was the idea that if "high school is Plan A, and Plan A is not working [then] what is Plan B?" It was about students who wanted, or were ready to drop out of high school. Plan A was to complete high school,—but if that was not working for the teen.—

[22] *Ed Zed Omega* meaning: "done with education".

what could be done instead? In *Ed Zed Omega,* high school students were hired to role-play in character and dialogue. They had online discussions, posted personal (fictional) stories, blogs, images, and videos on the main website[23] which was open to the world so anyone could participate. This experience also included real-world get-togethers at the Walker Art Center in Minneapolis, Minnesota where students could meet with the general public to talk about their experiences of why high school had not worked for them. Students could ventilate feelings they'd had, but had not been able to find an outlet for. The get-together was an opportunity for people to share with these younger students their own lived experiences. Eklund explained his design as a story-generation engine:

> What *Ed Zed Omega* really was—who it really engaged, were young adults, people in college or who had recently come out of college, or who just really had things to say about the educational system. There's just no forum in which you can say those things…[At the Walker Art Center during the real-world meet-up, people] would forget essentially, that [the students] were characters within thirty seconds of beginning the experience. [Visitors] would start talking to them very earnestly about what education is all about and they would bring up their own stories about education, where it failed and where it didn't.

In this experience, it was difficult to define what success meant in a measurable way; however, from Eklund's vantage point, the topic, the conversations that became available, and the outlets for people to talk about what was meaningful to them were things they had not had a chance to discuss before and this was what made the experience valuable. Here were people who connected and informed one another. It offered participants the opportunity to explore the

[23] http://edzedomega.org

question of what one is to do if they cannot take being in school any more. Eklund said that while high school students were encouraged to take the path to college, there was no "if you want to leave school, here's a program of learning that you can undertake" information for the students who did not want to pursue higher education. Eklund said that one of the reasons why they "created these personas [was] so that kids who had questions about education could indeed find someone to talk to about those [questions]."

The idea of co-creation that is embodied when player-learners worked with others to produce quality work is one that Karine Halpern promoted. She explained that "people create together so that they will be more efficient...learn from each other. [When] working with digital tools we also learn how to be participants within a [culture]. We are never alone. We always use some kind of tool to chat and collaborate." Halpern, like some of the other co-researchers, is a strong proponent of student-generated games and narratives that offer the idea that teachers should assist students and ensure students have the right tools; however, beyond this, teachers should allow students to be the content creators. She noted that the creative process, related active learning experience, and the gamification further support engagement and results in strong learner buy-in which leads to efficient work.

I was able to extract some initial thoughts on how content is delivered over various media and how one can bolster learning through engagement. As illustrated by these co-researchers' statements, it appears to take place via the opportunity to participate. This question, however, was only partially answered and a future study could look at students' lifeworld and lived experiences when using cross-media in formal and informal learning environments.

Implications

To be multi-literate signifies essential skills in reading, writing, and communication though various channels in the 21st century (Alvermann, Gillis, & Phelps, 2013). Most educators want their students to master these abilities in our increasingly information-rich and technologically-complex world. They want students to negotiate through discourse and to think critically about what they are reading and learning. Instructors want and need students to engage with the content for increased participation, retention, and to have students bring out their curiosity as a vehicle for learning. Still, most teachers lecture and give out reading assignments and worksheets.

My co-researchers are part of a different tradition; they embrace a teaching culture that employs game-like narratives and stories to educate learners in formal and informal environments. The technology provides the avenues to design and deliver immersive stories. In the interviews, co-researchers shared what inspired them and how they experienced their teaching. What became visible was their desire to make a difference in the lives of not just students, but learners, and this was the essence of their experience. They wish to change the traditional lecture environment and to disrupt learners so that they become frustrated; eventually through these stories, they will open their eyes to see patterns in the world. The co-researchers initiate learning by generating sparks of interest that can transition and transform the learner to become a critical thinker, problem-solver, an agent who takes ownership and action, and makes their individual voices heard publicly, individually, and collaboratively. The learning coach—*sensei* —wants to affect learners and touch them with their knowledge; through inspiring stories, they want learners to take action toward a better world for themselves and others.

Stories contain messages and truths. Fables, for example, describe and share common learning and set the scene in an animal-humanoid world to disguise real people, but they share strong messages through—lifeworld stories. MacIntyre (2012) wrote,

> Of what story or stories do I find myself a part? We enter human society, that is, with one or more imputed characters—roles into which we have been drafted—and we have to learn what they are in order to be able to understand how others respond to us and how our responses to them are apt to be construed…deprive children of stories and you leave them unscripted, anxious stutterers in their actions as in their words. Hence there is no way to give us an understanding of any society, including our own, except through the stock of stories which constitute its initial dramatic resources. (p. 216)

Learning comes from discourse, ardent thinking, connection-making, and actions. Using narratives and activities that tie the learning to the real world, co-researchers appeal to their learners' emotions to think more broadly about "the good" for themselves and the "good of man" by developing agency. The *telos*—the purpose of being a learning coach or *sensei*— is a catalyst to generate quests using storytelling toward learner-discovered reality.

Why is the essence of the lived experience of my co-researchers important? Our schools need instructors who can motivate and engage students to become creative and critical thinkers. These teachers can help develop citizen-learners who can recognize patterns and problem-solve. Our world needs individuals who can see and tackle the larger problems we face as humanity and collaborate to solve larger difficulties.

For example, cancer kills millions annually. Therefore, cancer research is agreed upon as important and an issue that requires collaborative problem-solving so that the world can address it. However, viewpoints also diverge on large-scale problems. Empirical evidence points to real

climate change on Earth. Some think it is greenhouse gasses that cause the climate change. Others hold that the Earth has gone through such phases in the past; the situation is cyclic and Earth is now entering a phase when the climate naturally becomes warmer.

In this diverse, global challenge context, individuals will not solve such large problems as curing cancer or limiting climate change. However, together in large crowdsourced spaces that allow idea-sharing groups, people can collaborate toward finding answers, using this collective intelligence and shared knowledge that no single person holds. We have evidence of this power in transmedia experiences. For example, in the ARG *The Beast,* people collaborated on a *Yahoo* group and called themselves *The Cloudmakers*[24]. Working as a group to puzzle together pieces of information the Cloudmakers managed to solve the brainteasers they encountered and then complete the game by strategically looking for patterns and assembling pieces of information into a cohesive, meaningful whole. The game was larger than any one person would have been able to solve; however, the Cloudmakers evidenced that the power of collaborative problem-solving can result in overcoming tasks by applying collective intelligence.

Comparably, Coren (2011, September, 20) wrote in a *Scientific American* article titled "*Foldit gamers solve riddle of HIV enzyme within 3 weeks*" about collaboration among gamers and researchers at the University of Washington. Gamers used intuition and insight to solve a problem that had been "stumping scientists for a decade" (Coren, September 20, paragraph 5). With the help of the gamers' strategy skills, the researchers "revealed the [HIV] enzyme's structure within three weeks and identified targets for drugs to neutralize it" (paragraph 5). In this way, a massive challenge was resolved by using the problem-solving skills of the many.

In a blog on the *The Guardian* site, Mohammadi (2014, January, 25) wrote that gamers and scientists make a good team. Though it may sound as they are leagues apart, they are not.

[24] https://groups.yahoo.com/neo/groups/Cloudmakers/info

"Both involve solving problems within a given set of rules. Genetic analysis, for instance, is about finding sequences and patterns among seemingly random clusters of data" (paragraph 4). Another success story of how passionate individuals can assist researchers with organizing data and analyzing patterns contributing to new scientific discoveries is that of Daryll LaCourse. He received the Chambliss American Association of Astronomy Award from the American Astronomy Society in January of 2016. Daryll is a Zooniverse Planet Hunter which is "a collection of web-based citizen science projects that use the effort of volunteers to help researchers to deal with the flood of data that confronts them."[25] He was awarded for the discovery of "several new exoplanet candidates, more than 100 previously unknown eclipsing binary systems, and other notable enigmatic variable stars" (Planet Hunters, 2016, January 9).

In the context of these efforts, this study's co-researchers emerged as educational, lifeworld, teaching coaches who were each using strategies to move students toward meaningful learning, involving not just critical thinking and problem-solving skills, but also pattern recognition, development of agency, and awareness of their abilities to make a difference in the lives of others.

Recommendations for Future Research

No study is complete without suggestions for future research. In particular, four ideas for future research emerged:

- Sentiment analysis could be useful tools for a future analysis of the co-researcher transcripts to get a feel for emotions or feelings the co-researchers expressed during the interviews. Data gathered through sentiment analysis can provide "emotion recognition" and detect the polarity (positive or negative) of the interview transcripts (Cambria,

[25] http://www.planethunters.org/

Schuller, Xia, & Havasi, 2013), which would provide insight into how the co-researchers talk about and feel about their work.

- A future study could explore if there are groups other than Caucasian who have designed with, formally, or informally taught with alternate reality games (ARG) or transmedia storytelling (TS), or games per se. The co-researchers in this study were all Caucasian instructors or instructional designers. This result was by chance. Such a phenomenological study could explore if the essence of the lived experience differs from that of the co-researchers in the current study.
- The third topic comes from one of the study's participants who is engaged in dual-layered Massive Online Open Courses (MOOCs) as a way to carry curriculum and scaffold self-determination and motivation in learners.

> While most MOOCs require participants to self-regulate their learning, they are often directed into one learning pathway. MOOCs that rely on learner-centered design return some of the control over learning direction back to the learner, moving into the realm of self-directed learning. The goal of the dual-layer model is to encourage learners to understand the epistemological differences between various modes of learning, helping them to move more into the realm of learning *how* to learn, or self-determined learning (Crosslin & Wakefield, 2016).

In these dual-layered MOOCs, the curriculum made up the central narrative. In a sense, the different layers modified the central narrative to make it more approachable for learners who needed more scaffolding, and therefore functioned as additional content. Because MOOCs have become increasingly popular since their inception in 2001, a future study could explore the lived experience of MOOC designers or instructors who

design or teach MOOCs. Such a study could explore the essence of the lived experience regardless of ethnicity. MOOCs are international and so such a study would provide an interesting essence.

- Another idea comes from the additional research question "How does student engagement with the content delivered over various media and platforms play into the classroom learning and the overall learning environment?" This question was difficult to answer given only the co-researchers' perspective, leading to a suggestion for future research, which is to look at student's lifeworld and lived experiences when using game-like narratives in learning environments allowing reporting on how students see these experiences different from mainstream American classroom experiences.

Final Thoughts

I've completed my journey, listening to the stories of my co-researchers in order to understand the essence of their experience. What have I learned? If we consider the tradition and practices used within the broader culture of education—such as how one is expected to effectively teach with games and narratives, coupled with the perspectives shared by co-researchers—it has become clearer to me why game-like narratives have been used in educational settings. Through my examination, critical thinking, and having an open mind, I now see how this tradition is one I want to work with, and one I recommend to instructional designers, instructors, and others interested in using this type of learning for teaching and learning purposes.

My co-researchers strongly foster learning through the use of game-like narratives. In this study, they behave as change agents. They want to successfully instill skills and behaviors in

learners of all ages to bring about positive change, often though democratic processes. This change can be a small message or a concern. It may be a larger, systemic message to highlight a concern for our world, such as climate change or environmental sustainability. It may advocate for what individuals can do to help stop the spread of HIV, or reduce infant mortality. The goal may be to ignite students' thinking locally, within the walls of the classroom, or to have them think more globally. This develops a sense of personal efficacy and responsibility, leading to participatory actions toward change. Game-like narratives can motivate and inspire students in ways that traditional classroom lectures cannot easily match.

When I asked my co-researchers if they felt there was a particular subject where game-like narratives are a better delivery method, I heard them say no, it could apply to all subjects. They believe there is no reason why we should not teach with games, and there is no reason why we should only use textbooks. Their idea was to get learners engaged in actual real-world stories of change through collaboration and a deeper understanding of larger systems. This can be accomplished through alternate reality games and transmedia narratives. Games, they felt, could be intertwined in learning about math, science, history (which is a story in its essence), politics, ecology, and a myriad of other subjects. Jeff Watson said, and I have come to see this as true myself, that "games are not as good at delivering content as they are at facilitating people to discover content," strategies, and learn through trial and error. What becomes important is what we do in games, what actions we take, and how we communicate and collaborate. The learning-coach, "sensei", fosters learning that takes place in alternate reality games and transmedia storytelling—spaces where action and learning come into play.

APPENDIX A

RESEARCHER AND PEER REVIEWERS' SUBJECTIVITY STATEMENTS

Because I had started to wonder what it is that makes instructors and instructional designers use alternate reality games (ARGs) and transmedia storytelling (TS) to educate, I decided to research this topic. Both ARGs and TS are at their core storytelling and I have always been interested in stories: both to read them and to write them. In my doctoral studies my major professor had designed and taught using alternate reality games and I was curious about the experience. Using game-based narratives was a different approach compared to traditional lecture course. To me stories engage and communicate. Stories provide us with connections to the world, teaching us about past times and other cultures. I wondered what it was to instructors and instructional designers to use these techniques.

I grew up with stories. My father used to read a lot to my sister and me as we grew up. He truly instilled a love for reading in us. Summers were often spent on an island in the archipelago and on the shelves of the little cottage were the books in the series "*One thousand and one nights*"—a collection of Eastern and Asian folk tales. Our father would read us a story a night and later, as I was older, I would re-read these fascinating tales.

Father, who very much enjoyed reading himself, used to take us to the public library every Friday. It was always a treat when Friday came around. I remember roaming around the children's wing of the library, borrowing home picture books by famous Swedish children's book authors. With the help of these books, I learned to read common words prior to starting Kindergarten. As I become a more confident reader, I read Keene's *Nancy Drew* books and Blyton's *Five* books. I loved mysteries and books with historical content.

As a teenager, I read a mixture of books and content. For example, the biography of Mozart and other famous musicians, *The Russian revolution*, *The diary of Anne Frank*, *Child 312*

(Hans Ulrich Horster), and of course, the classical books *The Count of Montecristo*, *Ivanhoe*, and the like. My mother read a lot of romance, and I would often borrow her books and read them as well. These books would provide an escape to a different kind of world—good or disastrous.

When I was eight, I got my first diary for Christmas. I started writing the following day and have since kept writing. When I was not writing in my diary, I would create my own little newsletters with puzzles, riddles, games, and crosswords for family members and friends.

I started learning English in third grade and loved it! I studied hard and read everything English I came across to become really good at this new language. Soon I wanted to go visit England. It seemed like an amazing place. I read about London, plowed through brochures describing all the sights in London, and then I wrote my first book at age ten in a notebook. It was a book about friends going to England and all the fun they experienced while there, seeing sights and meeting new friends. I gave the book to my father. He rewarded my eager writing by taking my sister and me to England the following year. It was just as fantastic as I thought it would be.

While in England, I bought magazines to bring home so that I could continue reading and learning more about youth culture in England. I even started subscribing to a couple of magazines. I found columns in these magazines where teens were looking for pen-pals and sent off letters to few girls and boys. Soon I had several friends to write to, not only in England, but also in Tanzania and in New Zealand. I loved getting my letters in the mail and would reply as soon as I had an opportunity. I even visited with one of my pen-pals in England one summer and she came to Sweden the following year.

I also loved to write essays at school. When we were allowed to choose our own topic, I would write fantasy stories. Writing was my best subject. I remember my 5th grade teacher

giving me five stars on a paper and writing “Don’t ever stop writing!” I was so proud of that comment; I promised myself I would never stop!

Upper Secondary High School was tough. The readings were not fun. The academic content was uninspiring. The competition for grades was hard and I didn’t get any help with math, which was my hardest subject. I wanted to drop out of school and start working. Luckily, my father talked me out of it and once again inspired me. At the end of High School I decided to continue my study at the University. I spent two years learning Art History and German at the University of Stockholm and really enjoyed reading even the thickest books in English as well as German.

German novels, however, were depressing. They were all about war, illness, sadness, and conflict. But I loved learning languages and wanted to learn German well. To boost my learning outside the classroom and make the reading more fun, I sought and came across Agatha Christie’s stories translated into German and I was soon reading amazing mysteries, learning German like never before.

When I started working for an engineering company, I got fascinated by what we could do with computers. Any new program I could come across, I would learn and master quickly. As a side project at work, I took on as the company’s newsletter editor. At home, in my free time, I started working on a handbook project for a club I was a member of. I was reading, writing, researching, creating, and designing with text, graphics, and photos using technology tools. Soon I was also designing Web pages for the club, myself, and my friends.

Moving to Texas was challenging as I had to go back to school and start college all over. I wanted to be a Web Designer but didn’t have the credentials I needed, even though I had the skills. Over the years, my goal changed and I decided I wanted to be an Instructional Designer

instead, then later a Professor of Instructional Design Technology. I have loved all the school reading, writing, and learning while working toward this goal. This semester I am completing my dissertation after countless of hours of reading, analyzing, critical thinking, and writing. On the road toward this terminal degree, I have also created a substantial publication record with many book chapters, journal articles, book reviews, and conference presentations. I am proud of my accomplishment and know my father and my fifth grade teacher would be as well if they knew!

What is learning and teaching?

Before I started in the doctoral program and before I started teaching Computer Applications (LTEC 1100) I did not see the problem with learning and teaching the way I do today. Ever since kindergarten I was a "good" student in the sense that I had been taught to be a student that: did what I was told, followed instructions, sat still, listened to the teacher, took notes, answered questions, studied for exams, took tests, and generally managed my time well. Now I know that I was conforming to the lecture learning practice that has existed for centuries where the teacher shares the knowledge and the learner is supposed to absorb as much as possible and then regurgitate it as valid knowledge later on. I also now see that there is limited room for creativity and thinking outside of the box in such learning. Instead, it is a strategically communicated learning. One that standardizes learning and shares the state mandated dogma. It is necessary to have some of this, yes. However, I now perceive that there are alternatives to this strict knowledge-sharing model, alternatives that allow room for personal cognitive growth and creativity of thought.

Why has my thinking changed? Mainly this is because I have been exposed to other types of learning theories through my studies. My mentor in the doctoral program has helped facilitate this growth and I do not think I would have reached as far with my learning and development if

it had not been for him believing in me and supporting my growth. He helped open my mind to different practices, such as using narratives and games in learning, practices that may be more beneficial for cognition and for memory retrieval.

Webster's handy college dictionary (1995) defined cognition as "the process of acquiring a conscious awareness; perception; cognizance" (p. 139). In particular, my thinking has become influenced by my mentor's theory of 'learning and teaching as communicative actions' (Warren 2011), which I have been fortunate to be able to help think through and develop together with him. The communicative actions of this theory provide the foundational strategic act, however, also the normative (the negotiated acts), the constative (the social consensus reached through discourse), the dramaturgical (the expressions of subjective life-world), and the affective act (sensitivity, emotional support). All of these communicative acts in combination allow for some form of discourse. Additionally, learning comes from inquiry and ardent thinking. With ardent I mean having willingness and a passion to learn, i.e., being ready for learning and eager to learn. I feel I have always been this eager and curious child when it comes to learning. I want to know and understand more and more. And I can do this by engaging in inquiry and discourse.

How do my perspectives affect my review of collected data?

My data will consist of instructional designer's and instructors' interviews—their reflections of their lived experiences with using alternate reality games and transmedia storytelling in learning contexts. Since the reflections will be done in one-on-one interviews, each co-researcher will be able to share their views with me individually and I see that co-researchers will therefore be able to freely capture their lived experiences or feelings toward the use of these story and game elements in the classroom fairly well. I believe their responses, the reflections, will be more truthful than if they had had a discussion in a small group session or a

larger audience setting because there will be no peer pressure involved with the interview in a one-one setting. However, their reflections may be colored by whether or not they have allowed me to use their names or stay anonymous. I am rather confident that my co-researchers' reflections, on a topic that is not necessarily controversial, will share their consciousness rather freely and accurately. I anticipate these instructors value communication between students and instructor, however, I will set aside this pre-conceived conception and let the data guide me as I engage in phenomenology.

What do I already know about this topic?

I am already fairly familiar with the subject of teaching in higher education using Twitter and Facebook social media. I have also written several book chapters and journal articles about their use in formal higher education learning collaborating with other researchers. I have read a lot about alternate reality games and transmedia storytelling in education and also written a book chapter and done a conference presentation on this topic. As I have done so, I have created a picture in my mind of what it means to students to use these social media tools and alternate reality games and transmedia tools in learning environments but also what it might be like for them to engage in such game play privately.

I am a student as well as an instructor, so am able to take two perspectives. As I have learned more about the subject I intend to study, I sense I have become less biased in my thinking. Being part of a community, as MacInthyre (2012) mentioned, allows you a way in to the community—a way which allows one to understand the nature of the culture. Me being able to understand what it means to engage with game-like narratives in learning has developed through me immersing myself with the literature, the research articles and literature I have been looking at and, from having implemented a transmedia storytelling experience with alternate

reality game components in one of my classes to get a first-hand look at the experience from the instructor's perspective.

Challenges of what I already know?

Moustakas (1994) writes about the relationship between noema (perceived as such) and noesis (perfect self-evidence) and how they "constitute the intentionality of consciousness" (p. 30). The intentionality (the purposefully chosen something) is built by the noematic aspect relating to the unraveling of what is going on in consciousness (what you feel) and the noetic side (the impact this has). As I interpret this, we, as researchers, have to carefully bracket aside our biases and consider the full picture to be able to share a full, clear picture of what is going on as we conduct phenomenological studies. This is what I am doing in this subjectivity statement.

I recognize that I already have knowledge gained through previous research studies and through conducting thorough literature reviews. This previously gained knowledge may initially position me in a biased position. However, I will take an as neutral position as I possibly can through conducting the *epoché* and I will let the data guide me toward the outcome—the central answers of my research question. I recognize that phenomena of the world can be explained in many ways and as such, this new study may not align with previous findings. Perceptions are by default individual, and I have set out afresh to listen to the voices of individual instructors to learn from their experiences and thoughts.

I now set these past experiences and any application of them aside while conducting this phenomenological research. I avoid seeking answers generated through psychology or the impact of the natural world on my thinking during my study. I disconnect myself from my memories and clear my mind to listen and learn from participants in my study of their experiences presented as they are by them without coloring it from my own thinking, feeling, and seeing.

Teala DeVries (Peer reviewer)

I'm an avid video gamer and really enjoy games I can play on my PC that also have other components like tabletop role-playing games, live-action role-playing games, videos, and mobile games. They all work together to create a really rich, interactive world. While I am no expert, I have some knowledge of alternate reality games and transmedia storytelling. I tend to think of alternate reality games as some sort of narrative structure spread across different platforms, like a game on the PC, a TV show or movie, books, and tabletop or role-playing games that all work together to create the world of the game. Players interact with the game through those platforms. I think of Transmedia storytelling as narrative/stories that, like alternate reality games, use multiple platforms to tell a story. Given this, alternate reality games use transmedia storytelling as a way to covey the narrative and plot of the ARG.

I don't have much experience myself with the use of ARGs in education, but I've had some experience with what I would think of Transmedia Storytelling in education – for example, reading *Romeo & Juliet* in the form of the play, watching one of several versions as a movie (like the Baz Luhrmann version with Leo DiCaprio and Claire Danes), and a graphic novel with Shakespeare's characters to learn about the story from different angles and characters from different perspectives. Storytelling and education go hand-in-hand, and I believe it's how we all learn best. In Lakoff and Johnson's *Metaphors We Live By*, they explain that "conceptual metaphors" (example: Love is pain. Life is a journey.) shape our communication and the ways in which we think and act. The human brain is wired to learn and comprehend through storytelling and narrative language, like through metaphors that make up some of the most basic ways we understand our reality. It stands to reason that we learn things through metaphor and story better

than by simply listening to dry, straight facts. Using games and storytelling/narratives in education is great way to help many people—from the very young to the very old—learn new things about the world around them, understand new concepts, and further their own creativity.

Chelsea Stallings (Peer reviewer)

I am writing this subjectivity statement about Alternate Reality Games (ARGs) and Transmedia Storytelling before assisting Jenny Wakefield with her dissertation research. I do not approach the analysis phase completely unaware of the subject matter; I transcribed four of Jenny's eleven interviews from May 2015 to July 2105 (Richard Curry, Ken Eklund, Patrick Oshea, and Scott Warren). Although this may be beneficial in that I already have a background knowledge of the specifics for this project, it also means my definitions and ideas of the themes of AR Games and Transmedia Storytelling, themes which I will explore during the analysis phase, are already influenced by some of the subjects' definitions and ideas instead of approaching this with my own background knowledge. Therefore, I do feel my analysis might be more subjective than objective during the analysis phase, although I will do my best to approach the analysis as objectively as possible.

Before helping Jenny with this project, I did not know what AR Games and/or Transmedia Storytelling was. More specifically, I did not know what they were by name but I had a general idea of them by practice and in theory. It definitely seems as though those who play AR Games regularly have no problem referring to themselves as "gamers." I personally have never been a gamer, but once I had an understanding of what AR Games are, I realized that I have played an AR Game once before when I was much younger. AR Games appear to be all-encompassing, compared to regular games such as *Nintendo's Super Mario Brothers*, where there is one end goal and there is really only one path the player must follow to get there.

Although with AR Games there is a still definite end to the game, from what I can tell there are usually multiple routes to get to that end goal. Further, I think it is interesting to note that failure as a learning tool is present in AR Games and not in traditional games- if the player can't figure something out, they have an opportunity to go back, retrace their steps, see if another route is an option, or they can figure out where they went wrong the first time and correct that mistake.

As far as Transmedia Storytelling, I was less familiar with this as a practice than I was with AR Games. A basic definition of Transmedia Storytelling is telling a story on more than one media platform- a physical board game, online, via the radio, via television, and so forth. It sounds simple enough, yet I do not quite feel as though that is the most in-depth definition. By existing on multiple platforms, it means there is a level of player interaction as well that goes beyond traditional storytelling, which makes it similar in some ways to AR Games. I am hoping that as I go along with the analysis of the transcripts that I will gain a better understanding of what Transmedia Storytelling fully encompasses.

So the big question is how can AR Games and Transmedia Storytelling be used in educational settings to teach? I think this question was born because there are two overwhelming problems with traditional teaching methods today. First, these traditional teaching methods are quickly becoming outdated as new generations of students are born into the digital age- they do not remember a life before computers and before online interactions, when learning from a book and a pencil and paper was the only way to explore and/or record ideas or experiences. Digital media *is* the way. At the same time, traditional K-12 education has become more and more standardized, which is troublesome. The standardization of education strives to make it a one-size-fits-all mold, which means we, as a society, are expecting all students to learn the way teaching occurs instead of teaching students the way they individually learn best. Although

students are still learning 2 x 2 = 4, there is no real world implication behind this. Students do not understand *why* they need to learn this other than to pass a standardized state test.

I think a more important question, therefore, is how can students learn from AR Games and Transmedia Storytelling when incorporated into teaching? This question is a little presumptuous because it already assumes that there is a need and a place for AR Games and Transmedia Storytelling in education, and I suppose that means I approach the analysis of these eleven transcripts agreeing with that statement. Again, maybe I agree with this more strongly because I already transcribed four of the interviews. But even before I transcribed those, I still identified the two issues with "traditional" teaching methods I previously described as problematic. Therefore, because AR Games and Transmedia Storytelling are so multi-faceted, so interactive and multi-sensory, I do think as a teaching tool they can both be very effective in the K-12 classroom: I think they can assist students who do not learn from the "traditional" teaching method; I think they have a better ability to show students *why* they need to learn 2 x 2 = 4; and finally, as society marches more and more into the digital age where future jobs and careers fully rely on employees having a comprehensive knowledge of computers and evolving technology, student participation with AR Games and Transmedia Storytelling, in and of itself, is a real world application and future job tool that students are learning, unbeknownst to them.

APPENDIX B

INTERVIEW QUESTIONS

The following is a list of open-ended qualitative questions for co-researchers in this dissertation research study. Interviews were synchronous. Questions were intentionally left open-ended and were semi-structured to allow the researcher to ask follow-up questions as the interview proceeded so as to reach complete saturation of topics discussed. This is a technique used and documented by Mack, Woodsong, MacQueen, Guest, and Namey (2005).

1. In this study, you may choose to be anonymous or participate with your name. The anticipated benefit for you participating with your name is related to your work. When you participate with your name, your work is expected to get exposure through the publication of the dissertation study and related publications. Should you want to change from one to the other, you will be able to do so within 10 days of the end of the review of the interview. Are you willing to participate with your name or would you rather stay anonymous?
2. Please share your background, hobbies, and non-academic/non-professional interests.
    a. Where you are from?
    b. What is your educational background?
    c. What are your hobbies and interests?
        i. Do you read a lot?
            1. What genre?
        ii. Play sports?
            1. What kind?
        iii. Play games?
            1. What kind?
            2. Have you played many ARGs/TS yourself?

3. Can you describe the memories you have of the first one you played? Describe this first experience: sensations, feelings, images, excitement?

3. Where do you work now? What kind of setting is this?
    i. How long have you been there?
    ii. What does the setting/location mean to you?
        1. Does it affect (inspire) your work?
    iii. Is this an ideal setting for you as far as what you want for yourself for the future?
        1. If not, what would be a more ideal setting? Where are you going?
    iv. How would you place yourself in age? You may refrain from answering this question.
    v. How do you see your background/culture impact or affect your work (if at all)?
4. What level of education do you teach? (K-12, undergraduate, graduates?)
    a. What demographics are they?
5. Describe your day-to-day teaching:
    a. If you have a particular teaching perspective / Learning theory
        i. for example:
            1. Social constructivist
            2. Pragmatist
            3. Behaviorist

4. Realist

b. How does it impact your teaching? View toward teaching as a whole?

c. What courses (subjects) do you teach?

d. How many students do you have in average in these courses?

i. How important is group participation, collaboration, or socializing in groups to you?

1. How important do you see this (collaboration, for example) in the educational environment?

2. Have you always enjoyed collaborative work?

6. Describe what sparked your interest, or brought forth the idea of using Transmedia Storytelling (TS) / Alternate Reality Games (ARGs) in your formal classroom:

i. How did you decide on teaching with TS/ARG? Where did it start?

1. How often have you implemented such innovative experiences in your classes?

2. What are the pedagogical problems you address - if at all?

3. Beyond the explicit things you are teaching (subject matter) what are the secondary goals with using TS/ARG?

7. What are your thoughts on implementation of Transmedia Storytelling / ARG within your course(s).

i. Could you describe an implementation of ARG/TS that you have included in formal learning that went well?

1. One that did not go so well? Why?

2. What conclusions have you drawn from these experiences?

ii. What is the overarching role of ARG/TS use in your course(s)?

1. If it is set into place to carry curriculum—How do you intertwine the game element with the curriculum?
2. If it is used for other reasons, how do you incorporate it?
3. Do you feel the use of ARG/TS in your classroom affects your teaching practice? If so, explain how. (Does it make you, for example, more excited about teaching?)
4. Overall, how do you feel that ARG and/or TS contribute to the delivery of your curriculum (if you use it for this purpose)?
5. How do you see narrative and game elements at play in the classroom learning?
    a. What does it contribute with in particular:
        i. Student engagement?

iii. What subjects/curricular content do you see ARG/TS working well with?

iv. Are you planning future implementations?

8. What are your general thoughts on using ARG/TS in formal learning?
    a. Do you see TR / ARG as more informal or formal? How is that?
9. Would you share your syllabus with me?
10. Since the number of instructors that have used TS / ARG is still low, and because I may not have found names of all those who have, may I ask you to suggest someone you know who has implemented TS/ARG in formal learning who I might contact for inclusion in this study?

APPENDIX C

INITIAL EMAIL TO TENTATIVE PARTICIPANTS

Denton, XX/XX/201X

Dear XX,

My name is Jenny Wakefield and I am a doctoral candidate at the University of North Texas in the Department of Learning Technologies. My research interests are instructional design, social media, games, and virtual environments. Transmedia Storytelling (TS) and Alternate Reality Games (ARGs) reside at the intersection of these interests of mine and my dissertation research therefore focuses in here.

I have identified you as an educator who has used ARGs and/or TS in formal education through [Name of Network]. I am interested to find out more about your experience with using cross-media infused narrative for formal learning. My dissertation study is one where I will be using interviews with educators in the United States and the United Kingdom to try get to the essence of the experience. I am an Instructional Designer and a Teaching Fellow. I teach Instructional Design and Computer Applications at the University of North Texas in the Department of Learning Technologies. I have myself incorporated a transmedia storytelling experience in one of my courses to see how such an experience may be like, however, would like to find out from you, how you have used these techniques as vehicles to carry curriculum. Knowing what makes ARGs and TS good vehicles to carry curricular content will help us as Instructional Designers as well as Instructors to share with others interested in incorporating similar experiences in formal learning environments.

I would very much appreciate the opportunity to interview you about your work and include you in this dissertation study. Interviews will last about 30-60 minutes. You are invited

as a co-researcher as I will be using phenomenology to analyze the data and get to the essence of the lived experience. You will be able to review the data and amend or subtract from the transcript and we will have a follow up interview or email correspondence as needed. I anticipate to interview 8-10 people in the United States and Europe. After my defense, I will publish my findings in a book, and if you agree to participate with your name, your work will be further acknowledged. If you are interested in participating in this study, please let me know by replying to this email and I will share further information with you.

Sincerely,

Jenny Wakefield

University of North Texas | Department of Learning Technologies

Email: Jenny.Wakefield@unt.edu

APPENDIX D

FOLLOW-UP EMAIL AFTER COMPLETED TRANSCRIPTION OF INTERVIEW

Dear X,

Thank you so much for your time and interest in my dissertation study and your participation. I very much enjoyed our conversation today that inspired me. I will connect with you again sometime towards the end of the summer with the transcript so that you may, if you wish, review it and add to it or delete from it as a co-researcher. This is usually done in phenomenological studies. I may also return sooner, if I feel I need some clarification or additional information. I hope this will be fine.

Thank you again and all the best,

--*Jenny*

APPENDIX E

CO-RESEARCHER INTRODUCTIONS

CHRIS AVILES:

I went to Saint Joseph's University in Philadelphia and thereafter I came back to my hometown and worked in a nearby High School. I taught English for nine years. Six months ago, I left that High School and I moved to a new school district where I am the Ed Tech coach and I spend half of my day working with teachers and I spend the other half of my day working with students in the Innovation Lab.

I enjoy the occasional video game. I enjoy going surfing. I still couch and wrestle when I have the opportunity. I've wrestled pretty much my entire life. I have a Bachelor's degree in English. I am self-taught coding. I am self-taught a lot of the stuff that you need to run an alternate reality game. And I just started my Masters in Educational Technology at Boise State. I don't read a lot of books. I wish I had more time. But I read a lot. So, news online. I am a big fan of Reddit—kind of reading the comments in the forums. When I do get to read, I enjoy dystopian literature. So kind of the end of the world stuff is interesting to me. Or some of the classics: I am a big Edgar Alan Poe fan.

REBECCA BROWN:

I was born in Texas but I lived in California, Mississippi, and Germany. My father was in the air force for 20 years so I am from a lot of different places. My bachelor's degree and my first certification was all art—I have all level certification in art. I loved drawing and it is still one of my hobbies. I like to write. I write stories and I write lessons and try to record some things. My Master's degree was in elementary education and I expanded my certification to a

Master in Language Arts. I had a lifetime goal to get my PhD, which I completed a couple of years ago.

I played some online until I started my dissertation and then just didn't have time for *World of Warcraft*. But my students and I have been exploring *MineCraft* recently. I like to play socially when I do play. I like not only what we are doing but also the chance to connect with other people within a game. I do a lot of reading. Most of it is in the area of juvenile literature because I read a book, or I suggest it to my students, or sometimes my students will suggest a book that I really have to read. I like to swim. What I like about swimming is that I can totally get in my head and work-out problems, thinking about getting ideas, and thinking about what else is going on in my life. Certain inspirations I've had just because I was swimming and I am reflecting. It is that reflecting that is so valuable in whatever I do. Like it is inspiring. Sometimes I get some really good ideas.

MATT CROSSLIN:

I am a native Texan and stayed around my hometown Waco as I grew up. I went to Baylor University and after I graduated I stayed to be a classroom teacher. I taught 8th grade science in junior high for a couple of years. I started working on my Master's Degree after that in Educational Technology. From there I went to work for an educational publishing company and then went from there and worked for a couple different places and ended up at UT Arlington, where I worked as an Instructional Designer. I began working on my PhD in Learning Technologies while at UTA and last year I began working with the Link Research Lab as a Learning Innovation Coordinator. I also teach a course for UT Brownsville on Instructional Design.

In general, I like to read. I do some Web design and that is a hobby. I am also certified to teach art at the high school level. I read science fiction, spy thriller, fantasy, and superhero. I kind of have to avoid games because I get sucked into them. In the general area that I like to work, and it is working on innovation research, we are doing practical kind of mixing. We are looking at MOOCs and I like to look at things like that. I like look at what we are doing in education and start questioning why we are doing it this way—why we teach the way that we do. It is stuff that we hope is going to affect the future of education and change things. Change for the better, hopefully.

DANIEL CURRY-CORCORAN:

My family hails from Cincinnati, Ohio. We moved to Virginia Beach in 1981. I'm a big baseball fan. I'm a big science fiction reader. I'm a J.R. Tolkien fan, I've read all the *Game of Thrones*. I read whatever I can get my hands on: a lot of Stephen King, I read a lot of education and leadership books. I started college at James Madison University and went there for a year-and-a-half but I'm the first college grad in my family, so I really had no idea what I was doing. I decided to take a semester off and later transferred to Old Dominion University. I did my Master's and Ph.D. in research, statistics, and program evaluation at the University of Virginia.

I am currently in the position of the Executive Director of Technology and Accountability with Newport New Public Schools. The position has afforded me to play around with some different ideas out in the field and this got us into the work with Augmented Reality and how we can [use] iPods and other handheld devices. What we found out there in the schools [was] that they really were not using the devices to an extent that we would categorize as effectively. And by that I mean that—with what we know about teacher training and technology,

we know a lot of our teachers have been in the classroom for a long time. So I think many school divisions have struggled [with] how to introduce technology in an effective way. So we really wanted to focus on what we could do and how could we help teachers make these devices more effective for students.

KEN EKLUND:

I grew up in Arizona and went to college at the University of Santa Clara where I got a Bachelor's of Science in political science. I also worked a lot on the newspaper and as yearbook editor one year, so I was involved with writing and art and design through those extracurricular activities. Then I got a job as a commercial artist/graphic artist in Phoenix, but later had the opportunity to become a freelancer and I moved back here to the Bay area. Basically I've been freelancing at writing and in time also at game design. Now I am doing whatever it is that I'm doing, transmedia story-making, I guess.

I've always been interested in games, I grew up with three brothers, so we kind of had a natural foursome to play games in my household and we were all very interested in games. And so we were very aggressive toward the games that we got. We would look at them and we had no compunction whatsoever about essentially modifying the rules of any game to suit ourselves and to the way we thought the game should be played. Sadly, perhaps, I don't play very many games anymore. I actually just don't have the time. I engage with them to play a little bit to kind of make sure I understand how they work. You can only approximate if you don't actually play. I've also kind of engaged with a number of alternate reality games, not necessarily playing them but as an interested observer.

JOHN GOSNEY:

I consider myself an amateur scholar in all things popular culture—especially anything to do with popular music. I teach four courses in American Studies here at the Indiana University, IU. And all of that revolves in a fair amount around literature, or music, or things of that nature. I am a ferocious reader. I love to read. I love short stories. I love American writers in particular. My office is based in Indianapolis but as faculty liaison for learning technologies, I have university-wide responsibilities in all of our teaching centers across the campus, across the university. We have instructional technologists in each of our seven centers and those folks report up through me. IU is at the forefront of a lot of technology implementations. We have a very large innovative e-text initiative. We've been involved, over the years, in a number of open-source technology collaboration. IU is a very large public university that really highly values technology and how it is applied in teaching and learning. I have tremendous opportunities to think about interesting ideas, crazy ideas at times, and I actually have a chance of implementing them.

KARINE HALPERN:

I am an independent researcher, a freelancer, and a consultant. I have a non-profit organization in France called Transmedia Ready that I started some years ago. My background is in the film industry of the 80's. It was a dream of mine to engage in film and I started attending film festival when I was a teenager. Because I wanted to work in the film industry, I went to the United States and that is why I learned to speak English. This was at the beginning of the independent film industry. Being part of the independent film industry has been useful for me. And now being part of the transmedia community and the new tools and techniques,

understanding how different artistic disciplines are being used all together.

The two big topics of today relate to digital media and interactive storytelling and participatory culture. And these topics are health and the education—these topics can still have a big impact on the future. There are two concepts that I really like; to get people together to work in the same experience or project at the same time. This is the concept of the Hackaton. The Hackaton is a "synch and do tank" and so I call my nonprofit organization a synch and do tank. So the idea is to synch and once you have synched it is possible to work together.

PATRICK O'SHEA:

I'm an assistant professor of instructional technology at Appalachian State University. I've been here since the fall of 2010. I travelled quite extensively while I was growing up. I'm a child of a Navy family. I lived predominantly in the states until, until high school, and then we moved overseas. I graduated high school in Athens (Greece). After that I came back to the states and got into college, I kept going until I was finished and that culminated with a PhD. I taught in China for a little while as part of my teacher certification. I've done some international consulting for the Bill & Melinda Gates Foundation in Sub-Saharan Africa. I've done some Fulbright work in Asia.

I'm a fairly active person; my big hobby right now is running Tough Mudders. I love games. I play computer games, and I also play games with my kids, whatever they're interested in playing. I play some Facebook games, I play as a way of connecting with my family. One of my sisters lives in Alaska and my mother obviously wants to keep in touch with me so we play Scrabble online. And I play *Turn by Turn Marvel Avengers Alliance* on Facebook, just as a kind of a time to pass, you know, those kinds of things.

SCOTT WARREN:

My main two focuses at Western Michigan University were political science and English creative writing. I got my teaching certificate and my Master's in education focused on curriculum and instruction. I did most of an EDD at University of Houston in curriculum instruction focused on instructional technology but then I transferred to Indiana University and I did my PhD in instructional systems technology with a minor in educational psychology. Since then I've been both an assistant and an associate professor at the University of North Texas since 2006, and I continue in that role as well as now also the director and owner of the Koan School. The Koan School has become a major focus of my research in systemic change, and so I still do some of the video game stuff but only with the context of naturalistic settings.

JEFF WATSON:

I am originally from Canada. I did my education initially in English literature. After that I did a Master in Film and video production. I worked in the film industry in Canada for a period of time, mostly as a story editor. I became interested in the possibilities of using the Web and other new media as a part of my storytelling and as there is a good arts grant infrastructure in Canada, I was able to support doing a few small projects that involved a combination of movie elements, new media elements, and live action elements. I didn't know at the time that this would later be described as an Alternate Reality Game. I would make stories that kind of existed across many different context and were spread out over time and asked the audience to be very active in the way they piece together the story elements. That interest eventually became more appealing as a career direction. I heard about a Ph.D. program at USC which was a Theory /

Practice program in the School of Cinematic Arts. This is actually where I am right now. I am now a professor at USC.

I have ended up really gravitating toward what I now call creative process design, where I am creating game-like experiences, which help people to tell their own stories. I think where I became critical of the alternate reality game, especially in context education context, is that often it becomes about the stories that the educators have to tell and the students having to piece together the stories. To me that just seems like more of the same old education. What I am interested in is flipping the table and instead facilitating the learners to discover and create their own stories.

LANCE WEILER:

I graduated high school and I took classes at the community college. I never went on to the university. Instead, I started working on commercial production and started traveling the world. I didn't see a reason to go back to school. At the time I was really interested in filmmaking and production and since I was doing it, I was learning as I was going. I think that I have always been really drawn to storytelling in all different forms. I think you could say I am a storytelling agnostic. It doesn't matter to me what format or screen or device, or if there is technology or not. I am just really interested in telling a story and hopefully helping to evoke emotion, or empathy, or some greater sense of understanding through storytelling. I guess in a sense I am almost like a creative entrepreneur. Now-being recently appointed to the Director of experiential learning and applied creativity at Colombia University, I am tasked with experimenting with what the future of the university is and looking at the future of work and learning. It is really interesting to look at that trajectory.

APPENDIX F

INFORMED CONSENT

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Title of Study: Teaching Through Alternate Reality Games and Transmedia Storytelling in Formal Education: A Transcendental Phenomenology Study

Principal Investigator: Scott J. Warren, Ph.D. University of North Texas (UNT) Department of Learning Technologies in the College of Information.

Purpose of the Study:

The purpose with this study is to find out what it is to instructors and professors teaching with Alternate Reality Games (ARG) and/or transmedia storytelling (TS) in formal or informal classrooms. The research will look to find the common core of this experience. What makes the instructors include the cross-media narrative in learning experiences carrying curricular content? Exploring what makes instructors teach through ARG and TS storytelling using narrative and technology for delivery of learning could help us understand how we, as instructional designers, may design using such new techniques and innovations.

Study Procedures:

You will be asked to participate in a recorded interview that will last 30-60 minutes. The interview will take place in person (face-to-face) in a public participant-selected space or virtually in Adobe Connect Pro. Adobe Connect Pro allows for the conversation to be recorded. A red light is lit as recording is underway notifying parties that the conversation is being recorded. Additionally, interviews may be conducted over email as needed (written protocols) and may further allow you participate when there are scheduling issues. The researchers will take observation notes in a log book during the interview session to collect a thick record of data, such as is common in qualitative research.

Initial interviews will last between 30-60 minutes. Follow-up interviews or follow-up email communication will follow for additional clarification purposes as needed and are expected to take about 30 minutes of your time. You will also be able to review the transcript from the interview and be able to correct or add to the script after reading this. If you choose to do this, it is expected to take 1-2 hours of your time.

Foreseeable Risks:

No foreseeable risks are involved in this study. You may choose to participate either anonymously or with your full name. This will be asked at the beginning of the interview.

Benefits to the Subjects or Others:

The anticipated benefit for you in this study is mainly related to your work. When you participate and allow the researcher to mention your name in the final work, your work is expected to get exposure through the publication of the dissertation study. Further, since ARG

and TS is an emerging way of teaching, sharing your lived experiences may help instructional designers learn how best to assist other professors with designs of similar innovations.

This study will further benefit the field of education by examining how this model of instruction can be of help when teaching courses in formal learning through shared lived experiences.

Procedures for Maintaining Confidentiality of Research Records: The first question you will be asked is if you wish to participate anonymously (with your name not mentioned) or if you accept participating in the study with your name mentioned. Should you change your mind during the study, up to the point of 10 days prior to the dissertation defense; this will be changed according to your wish.

Questions about the Study:

If you have any questions about the study, you may contact Scott Warren at telephone number (940) 369-7489.

Review for the Protection of Participants:

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights:

Your name and choice below to participate indicates that you have read or have had read to you all of the above and that you confirm all of the following:

• Scott Warren or Jenny Wakefield has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.

• You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.

• You understand why the study is being conducted and how it will be performed.

• You understand your rights as a research participant and you voluntarily consent to participate in this study.

• You have been told you will receive a copy of this form.

• Your decision to allow your course activities to be part of this study or your decision to withdraw from the study will have no effect on you.

Check one:

I have chosen to participate in the study [YES]

ENTER YOUR NAME in the field below to certify that you have reviewed the contents of this form, the possible benefits and the potential risks and/or discomforts of the study. Your name in this field substitutes your signature.

APPENDIX G

THANK YOU LETTER TO PARTICIPANTS

Thank you so much for your time and interest in my dissertation study and your participation. I very much enjoyed our conversation today that inspired me. I will connect with you again and share the transcript so that you may, if you wish, review it and add to it or delete from it as a co-researcher. This is usually done in phenomenological studies. I may also return sooner, if I feel I need some clarification or additional information. I hope this will be fine.

Thank you again and all the best,

--*Jenny*

APPENDIX H

SUMMARY STORIES

CHRIS AVILES

Interest

Chris Aviles is a constructionist who uses game-based learning, experiential learning, active learning, problem-based learning (PBL), participatory learning, self-directed learning, collaboration, problem-solving, and connections to provide students with immersive real-world interaction, involvement, and puzzles in an impartial space. His goals include:

- Teaching students in a way that is better fit for today's technology and society
- Providing problem-based learning, critical thinking, and engagement of students through a play-driven, non-predetermined outcome and narrative
- Being the teacher who goes the extra way and meets students on their grounds so that they become motivated, engaged, and interested in learning while creating an atmosphere of fun and play in his classroom. Facilitate development of student agency
- Creating games for the classroom that are well-designed and ethical with everyone starting in the same place
- Using games to stimulate unconscious learning (students are unaware that they are learning)
- Providing a meaningful space and time for students who struggle and/or allow those who do not have afterschool activities, or go home to an empty house, to be part of something significant

Design purpose

Education should be designed so that students enjoy the classroom and learn without conscious effort: A well-designed classroom looks like a well-designed video game. Buy-in to learning can be achieved by ensuring the curriculum is motivating, providing student-centered activities, choice, and inviting students to play games, although games in the classroom should not be mandated

Intentionality

Engage and motivate students to put in extra effort. Use play to help students think, connect to the real-world, and provide activities for collaboration and problem-solving. Connect with students and work together to create and enhance the learning environment. Hold students accountable. Kids will learn through stories and games without conscious effort. Personal satisfaction comes from students who enjoy additional, non-mandated activities that contribute to their learning.

REBECCA BROWN

Interests

Rebecca Brown is a self-identified constructivist /pragmatist who uses active learning, applied learning, guided learning, problem-based learning (PBL), collaborative learning, game-based learning, and critical thinking. She promotes student ownership, agency building, real-world connection-making. Her methods include:

- Innovate for student learning
- Create, and have students create, immersive authentic, fictional stories that motivate students and drive their learning

- Have students as content creators
- Encourage students, but allow them to struggle and figure things out by themselves
- Have students solve problems and learn to self-monitor—facilitate agency development
- Engage students in learning as a way-into learning—create buy-in
- Use gaming pedagogies to reach the students and allow them to collaborate and make connections to real-world problems

Design purpose

Engage students through problem-based learning. Have students solve problems individually and as a group. Creative game designs based on problem-solving (PBL) and with a narrative that holds the suspension of disbelief. Allow students to have fun and enjoy learning. For more effective learning:

- Encourage critical thinking and problem-solving
- Have students reflect on their progress and process
- Invite students to play, to be explorers, problem-solvers, and active content creators
- Present authentic and near-real stories that hold a suspension of disbelief to drive student interest
- Allow students buy-in by allowing them to have choice (how to design/build their game)
- Present games as a way in for students to be better critical thinkers and make it more engaging and fun for them
- Use the game as a supplement to draw the student into learning.

Intentionality

To be a creative spirit—an innovator in learning for student engagement and success through immersive learning. Use intentional interactive design and creative learning for students. Use

stories that have the suspension of disbelief to entice the students and capture their interest. Use gaming pedagogies to help students learn through creative processes. Provide students ownership in their learning (agency building). Engage and inspire students through active and affective learning. Connect learners through story to real-world issues.

MATT CROSSLIN

Interests

Matt Crosslin has a connectivist and meta-modernist worldview. He questions the way we teach in education; he innovates with technology and uses collaboration, problem-based learning (PBL), critical thinking, creative, active, affective, and applied learning to encourage positive educational change. His methods include exploring technological innovation as an educational change agent and guiding students to be self-directed and self-determined learners by focusing on *how* to learn instead of *what* to learn.

Design purpose

- Bring about change in the way we teach by providing learner choice and a more effective use of technology
- Allow learners opportunity and support to create/build
- Connect learners with learning through ownership
- Allow student ownership of learning and choice of processes, networks, and online identity (agency building)
- Provide layers to allow learners to crisscross and scaffold learning modalities depending on individual learning needs

- Create stronger learners by teaching students to connect and collaborate
- Work in groups to inspire social interaction and problem-solving. Include peer feedback
- Encourage connected learning that takes place in the real-world, e.g., have learners produce artifacts as assessment evidence
- Promote “learning by doing” in a practical setting
- Avoid hindering creativity but allow some pressure and chaos. Problem-solving often occurs by wrestling with chaos and change

Intentionality

Be an innovator for educational change. Allow learners ownership of their learning through choice and opportunities for collaboration and connection through and with learning opportunities and promote development of critical thinking. Teach people to become learners and help them build agency. Invite people to learn in a crowd sourced space, engage in scaffolded learning using useful technology tools.

DANIEL CURRY-CORCORAN

Interest

He is a self-identified constructivist /realist who teaches instructors to be comfortable with allowing students to create content. He uses problem-based learning (PBL), critical thinking, collaborative learning, immersive learning, game-based learning, experiential learning, applied situated learning, students as teachers for increased student engagement and real-world connection-making. His methods include:

- Have kids learn, and apply learning though authentic learning, stories, role play, use of technology, involvement, and puzzles
- Provide teachers with ideas so they can teach problem-based learning (PBL) and engage students through role play and narratives
- Help students learn through play and help them self-organize collaboration (flipped classroom idea)
- Use disruptive technologies and be disruptive with learning
- Put learning in real-world context: tie to stories about earthquakes, viruses, dognapping, role play, publication (grammar, spelling), note-taking while focusing on overarching core learning goals
- Increase student engagement through content-generation
- Offer self-organized systems where students are responsible for their own learning. Develop learner agency

Design purpose

Create a new system where teachers disrupt and share with students in a way that has students think and problem-solve. Have students work with other students to think, problem-solve, communicate, and learn. Use free tools for collaboration and creating games for learning about the real-world. He suggests:

- Have students as content creators.
- Frustrate kids, intertwine some chaos, to kick their imagination
- Have students design and teach (buddy-system)
- Put fun into learning
- Provide meaning and activity

- Use applied learning-learning in the real-world through collaboration and story
- Teach students organization skills and learn through play—agency building

Intentionality

To not stand in the way of student learning. Use experiential learning. Allow learning through play. Increase engagement. Have students think critically, connect to the real-world, apply learning in the real-world. Provide problem-solving activities. Have kids learn through story and games. Allow peer-teaching and applied learning. Have students work together voluntarily as they realize they can find solutions as they collaborate. Use narrative to connect.

KEN EKLUND

Interests

Ken Eklund is a constructionist who connects stories and real-life by using problem-based learning (PBL), embodied learning, situated learning, active and affective learning, involvement, connection-making, and critical thinking. He explores how games can be designed to create immersive and meaningful spaces for learning that contribute to the sort of human awareness that players develop when engaging in the transmedia experience. He uses story as a thought facilitator and catalyst. He wants to give people public voice, a chance to make their voices heard, and to develop purposeful agency. Ken uses stories as facilitators of deep, critical, thoughtful, and creative thinking.

Design purpose

Bring about change in people through their own will, interest, and through learning to make connections. Provide awareness through a narrative leading to individually chosen change.

- Invite people to play, get involved, and use critical thinking toward change. Leverage

player's participatory power

- Connect learning through story and real-world problems and issues. Use story as a way in and a motivating factor
- Use players' participatory power and critical thinking toward life change
- Create engaging, affective story structures that are immersive and right for the medium
- Use story and experience as a catalyst to get people to think about their lives and different issues in the world. Intentionally create spaces where experience drives new ways of thinking—pattern development

Intentionality

Design immersive transmedia, engaging play-experiences, and collaborative learning environments. Invite people to share, create, connect, and think deeply while participating in a crowd-sourced space as a contributor to solve real-world problems.

JOHN GOSNEY

Interests

John Gosney is a constructionist who uses problem-based learning, active learning, collaboration, experiential learning, applied learning, self-directed learning, and connection-making. He likes to create immersive stories for teaching and learning by using both technology and traditional forms to engage students. He is committed to helping students who struggle with reading, analysis, and writing (literacies) by presenting interesting information and subject matter to engage them in the materials. Gaming pedagogies are employed to reach students and to allow them to make connections between the subject material and their own fields of interest.

Design purpose

Supplement classroom curriculum with active, game-based learning to engage students through problem-based learning, e.g., solve cases (PBL). Encourage them to collaborate through technology. Key elements are:

- Student-centered learning. Allow students buy-in by giving them choices (such as what to read, where to go, what to write)
- Invite students to play games, take an active role (field agent), and explore
- Mandate the games but keep them simple so students can play and to keep their interest
- Present every-day stories with a twist that create a suspension of disbelief to drive student engagement (authentic real-world stories). Interesting and inspiring information or subject matter provides a way-in for students
- Teach students to be better critical thinkers by allowing them to help build a narrative, i.e., where the story goes
- Accountability is measured through field reports and final class presentations. Student feedback, critiques, and interactions contribute to people skills

Intentionality

Include immersive gaming pedagogies to help students learn on their own to supplement reading and learning from textbooks. Prepare students to become more critical readers. Engage students through active and affective real-world learning. Have students make cross-curricular connections and improve literacy through applied learning. Connect the material with other learning to improve understanding. Assist students to expand their critical learning concepts.

KARINE HALPERN

Interest

Karine Halpern is a constructionist and connectivist who uses experimental, experiential, creative learning, collaborative and participatory learning, affective learning, authentic learning, applied learning, problem-based learning (PBL) and critical thinking. She employs interdisciplinary community building and believes in teaching others to innovate through interactive transmedia. Her methods include:

- Share important messages through storytelling
- Innovate and engage
- Generate awareness and promote public voice
- Collaborate, cooperate, co-create, build community, participate (participatory culture). Promote thinking and involvement. Learn together and from each other how to best use transmedia and integrate it into teaching
- Learn by doing
- Have students be content creators

Design purpose

Allow learners to co-create/build and express their artistic side. Instruct people that they have to have something to say if they want to share: a meaningful, bigger, important message. Have learners connect their message to something in the real-world. Hold experimental workshops. Facilitate interactivity, activity, and participation. Transmedia is more than entertainment. It is action. Have learners do something with the message/information. Allow students to become their own teachers and content creators. Promote agency building.

Intentionality

Be an entrepreneur, get people to work together on, and participate in, immersive transmedia

experiences. Drive interactive collaboration and experiences. Facilitate content creation for sharing powerful and important messages about the real-world.

PATRICK O'SHEA

Interest

Patrick O'Shea models constructionism and social constructivism. He allows students to be their own teachers by being content creators. He uses game-based, participatory, collaborative, exploratory, and affective learning to connect with students through stories within their environments. Students make larger connections with the content (cross-curricular) and the real-world by building new knowledge from stories and games. He pushes students to become more creative and active thinkers using engagement and exploratory learning (learning by doing).

Design purpose

Provide an opportunity to problem-solve, explore, create (as a form of self-directed learning), critique, and learn. Support student choice and build student agency. His goals include:

- Harvest student interest and build from there
- Have students as authors, content creators, producers, and critiques
- Provide choice for students (e.g., collaborate/compete/choose what to explore)
- Allow student buy-in
- Make learning fun, provide invitation to play
- Leverage appreciation by knowing your audience
- Importance of a good narrative / a good story to hook the students to create buy-in

Intentionality

Involve students in generating exploratory, active, playful, and affective learning. Leverage motivation through engagement, connection-making with content through story and through connection-making discussions. Generate engaged students and critical thinkers who push themselves. Encourage positive peer pressure, buy-in, discussions, and critique to support students' development of agency (e.g., deeper understanding of material). Allow students ownership through creative measures/building for cognition and improved retention.

SCOTT WARREN

Interest

Scott Warren advocates a social constructivist and constructionist worldview. He is interested in creating and teaching through story-rich games where students engage in learning. He uses problem-based learning (PBL), situated learning, collaborative learning, active, affective, and applied learning, game-based learning, participatory learning, connection-making, and critical thinking. He believes that learning occurs through communicative acts. To inspire students, he:

- Guides students' learning through social experiences
- Provides scaffolding for students
- Provides opportunities for students to generate their own stories and teaching/learning experiences

Design purpose

Provide ways for students to connect individual learning to other curricular and informal topics and to the real-world to provide them with a bigger, more holistic picture, and have them build their own identity (agency development). His methods include:

- Provide students an opportunity to construct learning and identity by creating their own stories and building their own experiences
- Provide scaffolding for student learning
- Invite students to build and create through critical thinking and problem-solving
- Encourage students to connect for interdisciplinary learning by providing a real-world problem. Have students play, build, and gain buy-in by having them design and develop using their own narratives or stories—which adds value
- Allow students to have fun learning
- Applied learning—students collaborate and communicate over shared interests and teach each other; use application as assessment

Intentionality

Invite students to become invested in their own learning—take ownership. Share and develop as individuals in society (agency development). Offer challenge through play learning and situated learning; facilitate and provide scaffolds for learners. Context is key as it allows connection-making. Provide an open invitation for students to design for teaching and learning (applied learning) and grow their own identities while engaging in real-world problems through stories. Provide a space and experience that acts as a catalyst for participants to think about their lives and the world. Create and provide opportunities for students to learn about relevant issues.

JEFF WATSON

Interest

Jeff Watson is a constructionist who uses applied learning, collaborative learning, immersive learning, and participatory learning. Students work in teams, engage in critical thinking, active creative learning, and problem-based learning (PBL) to target relevant (to students' degree), real-world tasks, and learn by doing. Creative design and creative processes lead to motivated learners who design their own media/games. Watson ties learning to the real-world to:

- Create motivating, real-world experiences for people
- Encourage a desire to learn and develop self-directed learners
- Build teams and collaborative/competition opportunities with tasks related to the real-world
- Have learners actively engage, immerse themselves, as content creators telling stories they want to tell
- Provide students creative freedom and choice
- Create a space where people can meaningfully play and have fun
- Transfer excitement and motivation for learning. Hook learners

Design purpose

Create playful experiences where people may connect, brainstorm, and engage in meaningful learning, problem-solving, and collaboration around a larger, real-world problem. Invite students to participate in a game and boost their desire to learn. Methods include:

- Creative design where students freely generate their own stories based on prompts
- Create topic spaces for meaningful play

- Facilitate learners' discovery and inspire them to create their own learning (motivation, problem-solving agency building)
- Have active learners
- Connect students for active, participatory experiences to pool resources and creative ideas
- Connect learners with context
- Connect students with alumni active in the students' field of interest (applied learning and real-world learning)

Intentionality

Help learners to develop agency by having them develop their own stories (to act independently and make free choices). Make learning visible though created communicative projects. Learning comes from interest, motivation, creativity, and desire. Assist with learner connection-making and community building. Learning happens best when students engage actively with the content and are excited about what they are doing. Learning is driven by interest, excitement, and motivation.

LANCE WEILER

Interests

Lance Weiler has a constructionist world view. He likes to create immersive stories for teaching and learning and help students find agency in created spaces. He is interested in engaging students in collaborative, problem-based learning (PBL) and active, affective, authentic, applied, experiential, exploratory, game-based, and participatory learning. He would like to:

- Have students build and engage in learning that is connected to the real-world

- Use affective stories to build awareness and make connections through stories
- Facilitate mutual respect for people's agency and help build learner agency
- Be an entrepreneur/culture hacker/innovator in the field of storytelling
- Explore new ways to inform/teach about important and engaging, real-world occurrences through collaborative storytelling projects
- Add elements of fun into learning

Design purpose

Active storytelling to engage students through stories that connect to real-world problems (PBL) and encourage critical thinking about the world. Engage learners in pattern recognition. Key elements include:

- Allow students to build agency and feel empowered
- Buy-in by allowing voice and choice (generates interest)
- Draw students in through affective, engaging, and immersive experiences
- Allow students to help build storied environments
- Connect learning with the real-world. Include some chaos
- Reflect on the learning through discussions and intertwine accountability measures
- Invitation to play and to have fun learning

Intentionality

To be an entrepreneur who uses storytelling to help students engage and learn through active and affective learning. Use stories and learning from stories as change agent. Connect through stories that allow everyone to learn something new. Teach about real-world issues that have implication

on society through authentic experiences. Have students build real-world storied environments to improve critical thinking, understanding, and improve retention.

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