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Touching Mercury in Community Media:

Identifying Multiple Literacy Learning Through Digital Arts Production

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Abstract

Educational paradigm shifts call for 21st century learners to possess the knowledge, skills, abilities, values, and experiences associated with multiple forms of literacy in a participatory learning culture. Contemporary educational systems are slow to adapt. Outside of school, people have to be self-motivated and have access to resources in order to gain media production experiences. Community-based media centers join arts and culture with technology and computing while addressing issues of social justice, access equity, and public policy. These agencies function as community technology centers and can be complex organizations, existing in many forms, each with unique characteristics as well as fundamental commonalities. The goal of this study was to learn if and how community technology centers foster learning in multiple forms of literacy. Three forms of literacy were identified: technological, media, and critical. To move beyond the phenomenological approach to understanding teaching and learning practices, the objective was to develop an evaluation protocol that would capture the rich ecological context of the organization with qualitative indicators of the unique aspects of each center, as well objective, measurable factors aspects common to all.

This study was conducted in two phases. Phase One was the creation of the protocol including indicators of multiple literacies, a site selection matrix, and a data collection guide. Phase Two was piloting of the evaluation protocol to develop a foundational case to be used for future comparisons. In Phase One, indicators of multiple literacy learning were devised relevant for 21st century learners. These indicators were aligned specifically with organizational, programmatic, and production activities within a community media arts center. The site selection instrument was developed as a means to pre-screen sites for the likelihood of multiple literacy learning experiences. The data collection guide was aligned with the ecological context

taking a broad view of the organization, moving in closer to learn about various programs, then focusing on one production experience.

In Phase Two, a case study was created of Media Bridges, Cincinnati, Inc. through analysis of public data and internal reports, interviews with staff and youth participants, and observation of a weeklong production camp. Findings from the case study showed indications of multiple forms of literacy learning at the organizational, program, and production levels within the ecological context. The protocol captured an organization that demonstrated its mercurial nature as they pro-actively and purposefully shifted methods of operation during a time of crisis while striving to retain their commitment to the mission of providing the education, equipment, and environment for the public to express themselves through media.

Implications of this research include: an understanding of ecological contexts that foster multiple literacy learning and participatory culture; an exploration of learning systems designs outside of traditional educational structures; development of an evaluation protocol to systematically research community technology centers and media arts organizations as alternative educational venues; research-based knowledge to strengthen the voice of community media organizations as they contribute to educational and media policy; and movement toward access equity in education and the public discourse.

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Chapter One – Purpose

The purpose of this study was to identify characteristics of participatory culture and multiple literacy learning within a community informatics setting. This chapter is about the paradigm shift in lifelong learning that is moving swiftly toward a participatory culture with the growing need for attainment of multiple forms of literacy learning. The contexts where these forms of literacy learning can potentially take place are presented through focusing in on the opportunities provided by community informatics in general and media arts centers specifically. This study is conceptually framed by theories of ecological contexts and meta-literacy for lifelong learning. The chapter concludes with the formation of research questions, goals, objectives, and anticipated outcomes.

As in virtually all areas of contemporary life, education has undergone a fundamental paradigm shift as a result of the proliferation of information and communication technologies (ICTs). Unlike ever before through the use of cell phones, the Internet, personal communication devices, and individualized production equipment, people can instantly access information, select content, modify it, and re-distribute it worldwide within moments. In what Fischer and Mullens (2006, p.8) called "a gentle, yet brutal revolution," major shifts in communication, information retrieval, media production, and content distribution are becoming the norm of a participatory learning culture. In this cultural paradigm, individuals are responsible for their own educational experiences as well as having a responsibility to contribute in a meaningful way to the knowledge base of larger communities.

Challenges exist for students in gaining access to computing experiences (both in and out of school); for developing an understanding of what it means to take part the in larger media and the public discourses; and, for gaining experiences that foster development of the wide range of

skills and literacies (Jenkins, 2010). The challenge for educators is how to provide youth with access to more environments that support the development of multiple forms of literacy through digital media arts education.

Behind this study was the premise of a fundamentally changing educational ecology and the need to create opportunities for youth to engage in participatory learning culture as a means of developing multiple forms of literacy. Do community technology centers provide multiple literacy learning experiences through digital media arts education; and if so, how do they do it? How do we know? The research question in this study was: What is an effective protocol to determine if and how multiple literacy learning was taking place within a community media center?

Digital media and learning (DMAL) is emerging as a field of study within education that is connecting participatory learning culture with digital media arts production (Digital Media and Learning, 2010). In DMAL, individuals have the agency to research, modify, create, and contribute media content to community development worldwide. Learning in this cultural paradigm brings opportunities for students as well as great challenges. Opportunities included in a participatory learning culture are: relatively low barriers to artistic expression; greater ability for civic engagement; strong support for the creation and sharing of creations; and some type of informal mentorship with more skilled participants passing along knowledge to novices (Jenkins, 2010).

Challenges exist in gaining access to computing experiences both in and out of school, as well as challenges in developing an understanding of what it means to take part in larger media contexts. Challenges also exist in gaining experiences that support development of the wide range of literacies. The challenges for educators are to provide expanded, enhanced, and

alternative environments that allow for development of the multiple forms of literacy relevant in 21st century contexts.

Changes in the employment and educational landscapes (Friedman, 2007), along with the need to upgrade American academic achievements, have generated a flood of human learning research that seeks to define the skills and literacies needed to obtain a 21st century education (Alexander, 2008; Bartlett, 2008; Beetham, McGill & Littlejohn, 2009; Leu, O'Byrne, Zawilinski, McVerry, & Everett-Cacopardo, 2009; Mahiri, 2004; Pearson & Young, 2002; Richmond, Robinson & Sach-Israel, 2008). These skills and literacies include development of knowledge and abilities in specific academic disciplines; abilities to use technology and information systems; the ability for understanding, producing, and distributing media content; and the evolving ability to live and work in the world. Educational systems, even in those schools considered technologically rich, are having difficulty meeting the needs of 21st century learners (Margolis, 2008).

Community-based video production experiences in community media contexts can potentially provide 21st century learning experiences. The intention of this study was to develop and pilot a protocol that would investigate how community media arts programs offer opportunities to engage in participatory learning culture using digital media arts production as a means of developing multiple forms of literacy.

Participatory Learning Culture

In the digital age, participatory learning culture is fueled by communication through on-line networked experiences and digital media production, with the potential to share knowledge and engage in communities across the planet. Meaningful, self-directed, independent and inter-connected learning is taking place as people seek information, produce digital content,

communicate on-line, and engage in peer evaluation (Gee, 2009; Jenkins, 2010; Livingstone, 2002). The use of information and communication technologies (ICTs) has changed the everyday behaviors of contemporary students with texting, gaming, friending, and chatting becoming the action verbs in a participatory learning culture (Itō, Baumer, Bittanti, Cody, boyd, Herr-Stephenson, Horst, Lange, Mahendran, et al., 2009; Jenkins, 2010; Palfrey & Gasser, 2008).

ICTs are considered the knowledge domains as well as the software, hardware, connectivity tools and innovation systems that enable individuals, organizations, and systems to communicate worldwide. They are the current tools available to find, gather, create, modify, and communicate information. In the digital age, these tools are generally thought to be smart telephones, the Internet, cameras, audio and video recorders, and other personal digital devices such as gaming consoles (Gee, 2009). However, ICTs also include books, televisions, and other traditional forms of media. ICT literacy is the ability to use these tools in whatever form for learning, change, and power (Warschaure & Ware, 2008). In regard to educational technologies, literacy refers to the use of tools as a means of enhancing instruction, such as the use of computers in the classroom, and increased connectivity to resources (Kahn & Kellner, 2005). Through the use of ICTs, people in varied contexts and of all ages are responsible for their own learning. They are becoming more self-directed to seek information, select it, build their own content, collaborate with others outside of their immediate proximity, distribute messages to vast and varied audiences, experience feedback, and re-enter that knowledge creation cycle in another iteration.

Participatory learning culture has definitive characteristics and highlights the social, intellectual, and economic implications for human learning, including the need to develop

alternative learning contexts. Characteristics include relatively low barriers to artistic expression and civic engagement, with strong support for creating and sharing creations with others. People learn through some form of informal mentorship, where what is known by the most experienced is passed along to novices through scaffolded exploratory experiences. Members in this culture believe that their contribution matters; and, they feel some degree of social connection with one another, at least they care what other people think about what they have created (Jenkins, 2010). Individuals in participatory culture have experiences that include complex relationships, creative productions, problem-based learning through collaboration, contributions to the public discourse, and peer evaluation.

Public educational systems are challenged to provide the environment, curriculum, and access to meet the participatory learning needs of Digital Natives, that is of individuals born after 1980 when digitally networked experiences became the ubiquitous norm (Prensky, 2001). Digital Immigrants, those of us born before that time, cope with the integration of computer technology in our lives with varying degrees of success and acceptance. According to Prensky, students' needs are changing and are no longer the same as those that contemporary educational systems were designed to teach. Fundamentally, they think and process information differently from their predecessors, seeking graphics before text, randomly accessing information, networking on-line for community experiences, seeking instant gratification, and playing games for learning as well as for fun.

Methodological shifts in teaching, according to Prensky (2001), need to include the presentation of concepts with less step-by-step processes and more parallel opportunities for learning. Content shifts that serve Digital Natives include teaching legacy materials (historic contexts) within a discipline as well as references to future learning that include not only

technology- or discipline-related future knowledge, but also the literacies of ethics, politics, sociology, languages and other meta-themes. People born during the digital era are experiencing society, culture, education, the workplace, recreation, politics, commerce, and many other aspects of life much differently than prior generations (Alexander, 2008; Itō et al., 2009; Montgomery, 2007; Palfrey & Gasser, 2008). The challenges faced by educators are to recognize what changes are needed in regard to how we teach, as well as what we teach to students of all ages, and then to find ways of implementing those changes in a wide range of alternative educational contexts (Cope & Kalantis, 2010).

Terminology has emerged to describe and categorize the nature of the behavior of Digital Youth in regard to socialization, exploration of innovations, and in-depth technological pursuits. These terms are *hanging out, messing around,* and *geeking out* (Itō et al., 2009). Social media has become a primary institution of peer socialization, much as the role of *hanging out* at the mall, at school, or on the street was previously. Central to digitally hanging out is learning through exploration and participation in informal community settings where peers interact and are developing technological prowess. Youth are learning to understand the larger social and cultural concepts relevant to teens as they transition into adulthood. *Messing around* refers to the informal investigations youth engage in while exploring and experimenting, as they become adopters of new technologies. This experimentation is considered an important aspect of learning with relatively low investment of risk and few consequences for trial, error, or failure. It is a valuable means of investigating interests and finding means of expression through experimentation with technology, content, and individual identity representation. Searching for information on-line, producing media, playing games, and investigating new forms of technologies are within this definition. *Geeking out* refers to an engagement with technology

that is more intense, focused, interest-driven, and complex. For youth with resources, these activities can mean deep knowledge, participation, and peer-based contributions in communities focused on narrow interest areas such as anime remixed videos and fan fiction groups. It is through opportunities for engagement with digital media in supportive contexts, that youth are able to explore technologies to the degree that learning has a significant impact on their lives. Those without resources do not have those opportunities.

Media and media arts. At the nexus and the praxis of this paradigm shift to participatory learning culture are media arts and digital production. *Media* is a term defined individually, relationally, and contextually, as are the terms *art* or *mom* or *home.* Media is an umbrella term that refers to several concepts including an economic industry and those who work in it. The term media can refer to the people, the tools, the content, the context, or the delivery system. It is might mean a combination of several things. The media and media artist in the broadest sense, occupy unique places in contemporary society as orators, narrators, critics, clowns, and propagandists. Media is a significant sector of the economy, as well as a forum for public discourse (Jenkins, 2010). Media arts defined in a narrower sense are a nuanced and contentious mash of terms, utilizing various capitalizations and plural forms, each emphasizing specific niches within the mercurial field of media studies (Cope & Kalantis, 2010; Lankshear & Knobel 2007; Leu Jr., Kinzer, Coiro, & Cammack, 2004; Livingstone, Van Couvering, & Thumm, 2008; Mahiri, 2004; Pinkard & Sweet, 2009).

Traditional media is one-way communication with one sender creating a message for many receivers. *New Media* describes the aesthetic and technological context of digital arts creation, dissemination, and the nature of audience/artist interaction through networked communication. Compared to the traditional communication model of a message originating

with one sender that is distributed through restricted channels to multiple receivers. In new media, the creators originate messages with the intention of interacting with multiple receivers, who, through their interactions and contributions, enhance the meaning of the message. The main focus on content remains consistent with ICTs providing capacity for interactivity that shifted the paradigm to *new media*. In a highly participatory culture, the central themes in media arts education are the creation of content, means of distribution, interactivity, and feedback cycle-based learning that is amplified by a greater percentage of the population able to contribute.

Arguably, any art form of any era from cave paintings to cathedrals, literature, or theatre, reflects the social, cultural, intellectual, economic, and historical aspects of living and learning in that specific era and could be considered media. Unlike any other contemporary art form, expression of digital media arts create cultural influence with incredible power in social, economic, and governmental spheres. Media and media arts are at the center of the public, commercial, and political discourses. The truism *"The medium is the message"* was encapsulated by Marshall McLuhan (1964, 2007) to describe the unique nature of the cultural, social, political, and economic power of media that grew as television rose to be the main cultural representation venue in the 1970s, 1980s and 1990s. McLuan defined the importance of understanding how the message is constructed, its content, where it is sent, and how it is delivered in order to truly understand the message, both for the sender and for the audience. With the medium as the message, production and content were intertwined and intrinsic to understanding the power of media and media arts. This is the fundamental basis of media literacy. In a participatory learning culture, in the era of personal media production and

distribution capacity, individuals possess greater responsibility not only to understand media in this expanding media-rich context, but how to maximize participation for their own learning.

Digital production. Digital media arts production experiences can provide very effective participatory learning experiences depending on multiple factors (Halverson, Lowenhaupt, Gibbons, & Bass, 2009; Itō et al., 2009). Effective digital media arts education in a participatory learning culture is about creating meaningful scaffolded experiences that allow exploration time for research, experimentation, production, distribution, and collaboration. Through scaffolded media production and distribution experiences, participants exercise their ability to gain a wide range of knowledge and skills, as well as learn the less tangible attributes of attitudes, values, and ethics.

Digital artists and independent media makers were early to embraced participatory learning culture in the 1980s. They were using media innovations to create art and to teach youth about technological literacy, media criticism, activism for social change, and most importantly, to access a larger world community utilizing video production and the public cable access systems (Halleck, 2002; Howley, 2005). During the 1980s and 1990s, the forms of video production and distribution technology available limited their access to media distribution streams. High production costs impeded independent media producers' ability to create large-scale, mainstream impact, and thus marginalized their ability to effect social change. Now through the proliferation of individualized media production equipment, fewer barriers exist.

With ICTs, the tools for creating digital media art can literally be held in the palm of one's hand, with the capacity for self-producing and distributing media worldwide. Production and distribution once available to only those in digital arts and media fields now are accessible to many, many people around the world. This is the vary core of participatory learning culture. As

with every art form, the digital arts possess aesthetic traditions as well as technological conventions used to critique pleasing, thoughtful art with social impact. Learning to make digital art involves knowing how to work with the tools, as well as how to take part in the on-going artistic discourses involving aesthetics, message, impact, audience, technology, and peer-evaluation (Jenkins, 2010).

Artifacts and outcomes. Teaching and learning through digital media arts production involves experiences in learning about processes as well as about constructing products. Digital artifacts are audio, video, still images, or document files. The digital artifacts represent the products created through engagement in digital arts activities. The content of the piece as well as the digital file itself is considered to be the digital artifact. The outcomes of the teaching and learning through media production include the experiential accomplishments along with the creation of digital artifacts. It is through both the process and the creation of digital artifacts that learning takes place as participants gain an understanding of production as well how to create interesting media content.

Multiple Forms of Literacy

Forms of literacy in a participatory learning culture are in domains such as design, navigation, meta-cognition, and innovation adoption as well knowledge and skills in traditional academic subjects (Gee, 2009; Jenkins, 2010). Possessing multiple forms of literacy means understanding the language, symbols, behaviors, social norms, historical information, legacy knowledge, and communication modes that are require to navigate information, construct knowledge, apply it meaningfully.

Literacy is an essentially dynamic construct with terminology changes emerging from across disciplines with definitions in flux (Gallego & Hollingsworth, 2000; Leu, et al., 2004;

New London Group, 1996; Williams, 2009). According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), literacy is the ability to identify, understand, interpret, create, communicate and compute, and using printed and written materials associated with varying contexts (Richmond, Robinson, & Sachs-Israel, 2008). It is the continuum of learning that enables individuals to achieve his or her goals, develop his or her knowledge and potential, and to participate fully in their community and wider society. It is about knowing and being able to access, evaluate, and use information from a multitude of sources, and contribute new knowledge to others.

The term *literacy* is fraught with political, social and cultural implications (Bartlett, 2008). From a socio-cultural orientation, Bourdieu explored literacy as a *reflective* act, where meaning is derived from the interplay of social and cultural capital, habitus, and an orientation within fields in which individuals are positioned differently in systems of unequal resources and distributions (Heller, 2008). *Habitus*, according to Bourdieu, is the predispositions and perspectives that an individual holds and acts upon based on their beliefs and lived experiences.

According to Gee (1991), literacy is defined in relation to an emersion in Discourses (uppercase) that is the theoretical model of situated and contextually related communication, distinct from discourses (lowercase). Discourses (uppercase) are encapsulated to mean the socially recognized ways of using language (reading, writing, speaking, and listening), of thinking, believing, feeling, valuing, acting/doing, and interacting in relation to people and things. Language is a crucial aspect of discursive engagement, but only one aspect of many that comprise literacy. According to Gee, the term literacy describes the abilities of understanding how to read content, evaluate quality, construct discipline content knowledge, join the discourse, present relevant artifacts, and benefit from peer feedback. Heller (2008) discussed how literacy

education is orientated within a discursive space and that the discourse is situated in a particular socio-historic context that responds organically to the symbolic domination specific to that space and time. Literacy as an educational activity moves from the relationship of individual wian th the textual, to the on-going practice of an individual relating to their constructed contexts.

Across disciplines. Literacy, as the definition is evolving, is the socially recognized ways of generating, communicating, and negotiating meaningful content through the medium of encoded texts within contexts of participation in discourses (Lankshear & Knobel, 2007). The term's evolution is shaping a new paradigm of understanding how learning is taking place through digital media and ICTs. According to Gee (2000), there are many different social and cultural practices that incorporate literacy, with many different kinds of literacies (legal literacy, corporate literacy, country music literacy, academic literacy of many sorts). People don't just read and write in general, they read and write specific sorts of texts in specific ways, and these ways are determined by the values and practices (habitus) of different social and cultural groups.

Literacy education has evolved from a sub-discipline of curriculum and instruction to become the key educational domain on the main stage of participatory learning culture (Gee, 2000). Scholars across disciplines are putting forth theories and creating meaning to the terms for expressing the convergence of literacy into a trans-disciplinary, meta-concept. The difficulty of pinning down definitions resulted from a convergence of domains, disciplines, fields, and scholars investigating how the digital age is transforming the meanings of literacy, literacies, New Literacies, new literacies, media literacy, new media literacy and meta-literacy. The focus of this study is on three specific forms of literacy.

Three literacies: technological, media, and critical. The three specific literacies that were the focus of this study were technological literacy, media literacy, and critical literacy.

These three forms of literacy were selected as a means of encapsulating tangible production skill sets, intellectual and aesthetic capacities, as well as critical thinking skills.

Technological literacy. This term refers to the proficiency with which individuals use computer equipment on a continuum that spans from the basic abilities to utilize tools, to the ability to create tools used by others. An individual who possesses greater degrees of ICT literacy is able to modify, develop, and share tools with other users (Kahn & Kellner, 2005; Williams, 2009). Technological literacy is a construct that is oriented in cultural and social contexts that include products, processes, and knowledge and is based on dimensions of (a) knowledge; (b) ways of thinking and acting; and, (c) capabilities to engage with technology (Hughes, 2004; Pearson & Young, 2002).

An individual who demonstrates strong technological literacy asks pertinent questions of self and others; regards the benefits and risks of technologies; seeks information about new technologies; and participates in decisions about the development and use of technology. Someone who demonstrates technological capabilities has a range of hands-on skills, such as using a computer for word processing and surfing the Internet and operating a variety of home and office appliances. A person exhibiting technological capabilities can identify and fix simple mechanical or technological problems at home or work; and, can apply basic mathematical concepts related to probability, scale, and estimation to make informed judgments about technological risks and benefits. Those with greater technological literacy recognize the pervasiveness of technology in everyday life; understand basic engineering concepts and terms, such as systems, constraints, and trade-offs. He or she is familiar with the nature and limitations of the design process; knows some of the ways technology shapes human history and how people shape technology; and knows that all technologies entail anticipated and unanticipated risk. A

person demonstrating technological capabilities appreciates that the development and use of technology involves trade-offs and a balance of costs and benefits, and understands that technology reflects the values and culture of society.

Media literacy. Traditionally, media literacy referred to how people give and get meaning from messages distributed through channels such as print, radio, billboards, or television delivered in one-directional communication to a mass audience. It was the ability for the receiver to identify the potential perspectives of the message sender, contextualize the channel, identify the intended audience, and decode the message. Proficiency in media literacy consists of a comprehension of message intent, form, function, sender, receiver, interactivity, and mode of production. Now, in the digital era, media literacy definitions are expanding to incorporate technological and social aspects of the production as well as the consumption of media.

New media literacies describe the set of cultural competencies and social skills needed for individuals to engage fully in a participatory learning culture (Jenkins, 2010). New media literacies include the abilities to: experiment with digital surroundings through play; adopt alternative identities through performance for the purpose of improvisation and discovery; interpret and construct simulations of real-world models; and, meaningfully appropriate, remix, and sample media content. New media literacies also include: the abilities to multitask, scan the environment, and focus on salient details; to interact meaningfully with tools that expand mental capacities; to collaborate by pooling knowledge and comparing notes with others toward a common goal; to evaluate the reliability and creditability of different information sources; to follow the flow of stories and information across multiple media modalities; to search for, synthesize, and disseminate information; and, the ability to negotiate across diverse

communities, discerning and respecting multiple perspectives, grasping and following alternative norms.

Media literacy versus information literacy. Information literacy refers to an individual possessing the knowledge and ability to access, assess, and to evaluate sources of information in various forms. Media literacy traditions stress the understanding, comprehension, critique, and creation of media materials. Information literacy stresses the identification, location, evaluation, and use of information materials (Livingstone, Van Couvering, & Thumm, 2008). The metaphor used is that media literacy sees media as the lens or window through which to view the world, while information literacy sees information as a tool with which to act upon the world. Media literacy aims at correcting the flaws in the glass, while information literacy aims at increasing the accuracy of the hand wielding the tool. Livingstone et al. (2008), described both metaphors as problematic and say that far more complexity exists in contrasting the two concepts.

Critical literacy. Critical literacy refers to the ability of the individual to recognize and act upon social, cultural, political, economic, and other factors in their lives. According to Morrell (2008), to develop critical literacies, individual must define themselves on their own terms, and must understand the role of language and texts in the construction of the self and the social. Goodman (2003) defined critical literacy as the ability to analyze, evaluate, and produce print, aural, and visual communication**.** In Freire's (1973, 2003) humanistic approach, critical literacy is derived from an individual's lived experiences with deep learning that is contextualized, relevant, purposeful, and powerful. Critical literacy in participatory learning culture is the structural basis for learning that is motivated by an individualistic and socially derived sense of agency and empowerment as a means for social justice (Richardson, Tapia, & Kvasny, 2006). Critical literacy and agency are related by the degree in which individuals take

responsible for researching their interests, evaluate the quality of the information they find, construct their own knowledge, and demonstrate it through the creation of digital artifacts consisting possibly of altered and found elements.

For this study, the definition of *literacy* meant a continuum of attainment of legacy knowledge (historic content and disciplinary traditions), learning skills, tangible skill sets, navigation abilities, and application of abilities through continual, lifelong practice. The term *media literacy* was used to encapsulate multiple forms of traditional and new media literacies. *Critical literacy* referred to the knowledge and ability to identify, assess, and evaluate the multiple print, visual, and communication factors that have impact on their lives. The term *active citizenship* was used to describe behaviors that reflect critical literacy and agency.

Learning Contexts and Access Equity

In the 21st century people need a wide range of varied experiences in order to develop the desired knowledge, skills, attitudes, values, and ethics to excel in contemporary society as well as more time to explore, discover, and create (Beetham, McGill, & Littlejohn, 2009; Richmond, Robinson, & Sach-Isreal, 2008). Engagement in digital discourses and development of literacy in multiple disciplines takes time for experimentation, exploration, and access to a more experienced person to facilitate and guide the engagement. With mediated guidance and access to resources, individuals can learn to express themselves through collaborative experiences that are relevant, motivating, and valuable for learning to access technology, create media, adopt innovations, and that have the potential to effect change in their lives. To participate in these discourses requires that people first know the discourse exists, then they need to have the time to think, experiment, create, and contribute (Livingstone, Van Couvering, & Thumm, 2008). These skills and concepts are learned through guided support and experimentation, in either formal or

informal contexts, but typically not by happenstance. Learning contexts designed well, both in and out of school, can potentially provide these opportunities.

In and out of school. There is a fundamental disconnect between the systems in which students are currently being taught and the ways in which they are spending the majority of their time learning. Contemporary public educational systems do not provide students with experiences to develop the literacies in technology, media and meta-cognition they need to thrive in changing global educational contexts. School systems are slow to respond to teaching the multiple forms of literacy students need to use emerging technologies and due to tradition, legislation, district policy, curriculum designs, and competing priorities for resources. Even public schools considered *high technology* are simply not designed to provide the digital computing opportunities to obtain a twenty-first century education (Margolis, 2008).

Contemporary students are in the awkward position of pushing forward conceptual shifts in digital learning with their out-of-school behaviors, and then being dragged backward during school hours. Significant digital learning is taking place through the formal and informal use of ICTs, digital media arts production, collaborative global media distribution, and networked digital communities (Itō, et al., 2009; Taylor & Keeter, 2010). Given they have the social and economic resources, digital youth spend their time creating, chatting, responding, seeking, and producing media out of school, while in school they strive to navigate an educational system that rewards mastery of standardized testing. Outside of class, many are motivated to gather information from multiple sources, modify it, produce content and distribute it on topics of their own choosing to peers in sophisticated self-evaluating communities, all the while learning new technologies, content and processes as they participate in digital environments (Gee, 2009; Itō, et

al., 2009; Jenkins, 2010). The challenge is to create opportunities to foster environments where these forms of activities can take place.

In a participatory learning paradigm, youth are empowered to move beyond their school experiences, work in communities, develop an understanding of media, master technology, and let innovation serve as a means for them to access larger audiences with their messages. Inherent in digital arts production are the opportunities to explore learning literacies in technology, media and visual imagery, as well as opportunities for gaining crucial social and critical literacy skills. Through Web 2.0 experiences, they have increased opportunities to access wider communities and the potential to effect social change through active citizenship. Experimentation in digital media is central for success in participatory learning culture (Gee, 2010; Jenkins, 2010; Livingstone, Van Couvering, & Thumm, 2008). To experience learning in a participatory culture, requires access to the opportunities that allow for exploration, creativity, and connecting with peers.

Access equity refers to the social, cultural, economic, and systemic issues related to bridging the technological divide to take part in a participatory learning culture. Ironically, with the advancement of technology and participation, along with the need for experimentation with digital media creates even greater academic challenges and access inequities for socio-economically disadvantaged learners in need of out-of-school computing opportunities.

Having access to the equipment does not necessarily translate into meaningful use of technology to improve life circumstances. There are significant distinctions between having access to computer equipment, acquiring the skills for using the tools, applying skills for personal management, communicating with networked peers, engaging in digital learning experiences, and participating in computing professions. The term *digital divide* represents the

various limitations of access to computing opportunities, mainly focusing on accessing technology as a tool for production. While *digital inequity* describes discrepancies experienced due to institutional and economic barriers that prevent access to the benefits derived from Internet and computer use (Kvasny, 2006; Mossberger, Tolbert, & Stansbury, 2003; O'Hara & Stevens, 2006).

Currently, there are many people who have been disenfranchised from attainment of technological education for an assortment of reasons. Aside from those who now have in-school limitations, there have been decades of unacceptable dropout rates with millions of people who exited formal education without attaining digital learning content knowledge. Those fortunate enough to access public education systems did not necessarily have the types of experiences that allowed for learning the multiple forms of literacy of participatory learning culture. Across public K-12 education institutions, resources are uneven to provide technological integration into course content resulting in low technology-based learning experiences (Margolis, 2008).

Additionally, the proliferation of digital technologies began in the early 1990s, years after many people completed formal public education. The Baby Boom generation's interaction with ICTs exemplifies technological learning outside of formal educational systems (Taylor & Keeter, 2010). To attain digital learning experiences they either have to be motivated intrinsically, reluctantly pressured, undertake learning technology as a survival mechanism, or accept that they are excluded from participating in this new social and cultural era. So while the development of alternative contexts makes a difference for the economic and educational prospect of contemporary youth, there is a need to foster learning opportunities for people all across the lifespan.

Accessing technological learning opportunities extends beyond building skills and knowledge, to creating the social relationships that potentially can provide improved educational and economic circumstances. *Social capital* is the value of relationships and networks have on an individual's well being. Relationships matter. By making connections with one another and maintaining them over time, people are able to achieve things they either could not achieve by themselves, or that they could only achieve with great difficulty (Field, 2008). The social capital that youth derive from interacting in networked communities has great value, as do interactions with instructors and more accomplished peers. Out-of-school computing opportunities have the potential to build alternative means of gaining social capital that would not exist otherwise.

Educational and economic. Expanding engagement in a participatory learning culture has the ability to effect social change and the potential to increase educational access equity. As the digital age moves forward, there is increased need for people of all ages to be able to use technology to access information, evaluate its quality, create or modify content, formulate new knowledge, demonstrate their learning, distribute work to relevant places, participate in communities, and engage in peer-review. Technological skills, understanding and evaluating media content, and the ability to engage in lifelong learning are central abilities for success in emerging digital knowledge environments and in the global workplace (Spring, 2009). The new reality is workplace preparedness that calls for a broader foundational knowledge across disciplines, as well as deep content knowledge in specific fields. There is also a need to possess the confidence to navigate change, the desire to continue learning throughout life, and the ability to build skill sets to meet as yet unknown workplace challenges (Friedman, 2005).

Public discourse. Access equity in the digital age is more than having access to the educational and employment opportunities. A significant social justice access issue addressed by

media literacy advocates is the ability to contribute to the public discourse through expression, commentary, and with fully protected rights of free speech. Achieving access to media channels has shifted as the digital age is unfolding in ways that are counter intuitive. While Internet access has opened the floodgates of digital distribution and generated oceans of content, the quality, reliability, and emphasis placed in media messages are questionable. Traditional wide-reaching corporate media distribution channels have consolidated operations, becoming more restricted due to market-driven controls that limit the range of voice reaching the masses. Access equity to the public discourse is a central element of media and media arts, and a major theme of participatory learning culture.

Community technology. Community-based computing opportunities take many forms and exist to fill many purposes. *Community informatics* (CI) is the study of how technological challenges and benefits are integrated into the developmental, social, cultural, and economic aspects of various populations. CI emerged as field within computer science and is considered both a field of study and a practice (Williams & Durrance, 2008). It is a sub-field of social informatics with the theoretical concerns of the relationships between human beings and technology including both interactions with computing as well as the benefits derived from peoples' participation with information and communication technologies (Kling, 2007). The challenge for scholars of social informatics is to look beyond the technology as a tool for production and to see the broader implications of the digital engagement, access equity, and of bridging the digital divide for participatory learning culture.

The field of CI consists of scholars from multiple disciplines including sociology, new media, technology, library sciences, economics, and education with all converging to learn how information and communication technologies can influence electronic learning, e-community,

e-commerce, and e-governance in social and cultural contexts. Issues being studied are related to community development, learning, empowerment, and sustainability with the goal of promoting the role of computing and Internet connectivity in society. According to Williams and Durrance (2008), the field of community informatics is at the intersection of transformation and continuity, between digital and community, and is building up a picture of what community computing looks like and how it is evolving as we move from the industrial to the information age.

CI scholars and practitioners study various geospatial communities, and conceive of an entire community as a unit of analysis when considering literacy and technology issues, practices and outcomes. CI research is conducted internationally in settings that range from inner-city neighborhoods to rural villages, and explores how individuals, and institutions (schools, libraries, grassroots groups, health agencies, etc.) work on common problems including access, agency and social capital (Bradley, 2006; Norris, 2001).

Community Technology Centers (CTCs) exist to fill the need for public computing access through programs that teach technological competency. CTCs exist in many forms and may be stand-alone organizations or affiliated with schools, libraries, for-profit businesses, or other community organizations. They are access points for the public to use the Internet and other media production equipment and to have access to technological learning opportunities. They exist around the world, serving people from across the socio-economic spectrum, and are sometimes geared toward serving specific populations such as youth, women, veterans, or other marginalized populations (Norris, 2001; O'Neil, 2002).

At the program level, in general CTCs offer workplace preparedness, computer and equipment access; technology and workplace skills training; traditional literacy education, youth enrichment programs, distribution access, with some offering mission-driven, community

focused projects that serve a social cause (O'Neil, 2002). Mission, policies, staff capacity, resources, and community participation levels govern offerings, with programming varying greatly in design, objectives, and levels of success.

Media arts organizations are a form of CTC focused specifically on providing access, technology, and education for community members to create digital art based on the traditions and conventions of the community media artists (Halleck, 2002; Howley, 2005; NAMAC.ORG, 2011). Community media organizations generally offer production skills training, afterschool and summer activities, and other enrichment events. The mission and traditions of community access media are to provide a public voice to individuals through public, educational and government (PEG) programming, media equipment, production support, social supports for the community, and distribution streams. While the communities that various organizations serve may be very different, the production support generally includes: training on equipment, processes, and media literacy; space; teams for producing; distribution channels; and advocacy for resources. These offerings evolved continually over the years based on the needs of the communities and technological shifts. They continue to be in flux.

Participatory learning culture opens up need for people to develop multiple forms of literacy. Teaching multiple literacies through digital arts programs in community-based settings can potentially provide opportunities for students across the lifespan and the socio-economic spectrum to use ICTs to increase mastery of technological literacy, media literacy, and critical literacy. The effectiveness of the CTC programs to provide multiple literacy learning is based not only on conscious participatory designs with objectives, activities, and assessments, but also depends on management, instructional quality, themes, and participant engagement. Next are the conceptual frameworks of the study.

Conceptual Frameworks

The theories that framed this study were: the ecological theory of human development (Bronfenbrenner & Evans, 2000), participatory learning culture through ICTs (Jenkins, 2010; Gee, 2010) and, literacy learning as a means of developing agency for learning, change, and power through community engagement (Freire, 1973, 2003; Wareshare & Ware, 2008). The themes of this research were informed by the evolving theory of meta-literacies learning through new media production in alternative educational contexts (Hope & Kalantis, 2010).

Ecological theory of development. The underlying theoretical framework was based on Bronfenbrenner's ecological theory of development that describes the holistic contexts in which an individual operates as relevant for their social, cultural, and physiological development (Bronfenbrenner & Evans, 2000). This ecological construct of development takes into consideration the characteristics of the individual, their surroundings, and social groups, as well as the larger contexts in which they operate. Social cybernetics is a complementary systems design theory that describes ecologically-based creative and educational systems, and theorizing how digital learning is changing how individuals function within the social, cultural, and organizational aspects of educational systems (Collins & Halverson, 2009; Thomason, 2007). This study was designed to capture the ecological contexts of the organization, program, and production experiences within one CTC where multiple literacy learning took place as is illustrated in Figure 1.

Meta-literacy and lifelong learning. To achieve literacy, people evaluate their information sources and gains sufficient content knowledge to work across multiple disciplines, in multiple modes, and to continue to learn new technology throughout their lives. Meta-

literacies according to Bourdieu, refers to how an individual exhibits the agency to navigate, obtain, and apply knowledge based on both practical and reflective theoretical stances (as cited in Scharito & Webb, 2003). Agency in meta-literacy is limited by the cultural contexts in which the individual operates, the extent of their experiences, as well as by the degree of reflection that takes place based on those factors. According to Bourdieu, it is through the development of meta-literacies that learning takes place, as well as the development of the practical and reflective abilities to capitalize on knowledge attainment. Literacy in a participatory learning culture is emerging in domains such as innovation adoption, design, navigation, meta-cognition, as well as in traditional academic subjects (Gee, 2010; Jenkins, 2010). In this study, the theory of meta-literacies encapsulated learning skills; cultural and social consciousness; systems thinking; and, abilities in assessment and evaluation (Hope & Kalantis, 2010).

Challenges, Questions, and Objectives

According to Jenkins (2010), any attempt to meet the challenge of provide meaningful media education in the age of participatory culture must begin by addressing three core concerns: (1) the fundamental inequalities in young peoples' access to new media technologies and the opportunities called *the participation gap*; (2) the assumption that children are actively reflecting on their media experiences and thus can articulate what they learn from their participation known as *the transparency problem*; and, (3) the assumption that children, on their own, can develop the ethical norms needed to cope with a complex and diverse social environment online, identified as the *ethics challenge*. In this study, these three assumptions were addressed as the need to foster technological literacy, media literacy, and critical literacy.

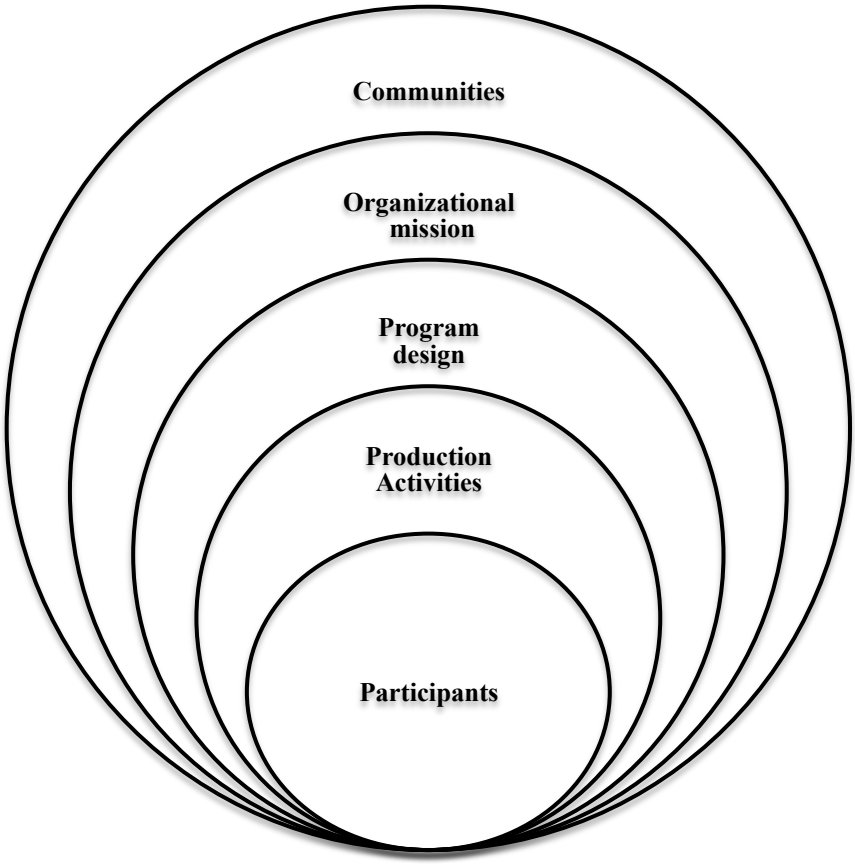

Figure 1. Ecological context of participants within a CTC digital media arts program. Participants take part in production activities within the various programs, offered by an organization situated within various communities.

Significant out-of-school digital learning is taking place through the formal and informal use of ICTs, digital media arts production, collaborative global media distribution, and networked digital communities in community settings (Itō, et al., 2009; Taylor & Keeter, 2010). To increase access equity in the community, the mission of many CTCs is to provide out-of-school digital arts production experiences. While it is difficult to measure technologically related access, equity, use, and outcomes, these are critically important factors to study and to attempt to measure (Warschauer & Matuchniak, 2010). This protocol attempts to address this issue.

In media arts organizations specifically, the explosion of participatory culture creates not only shifts in the not-for-profit operating models, but also shifts in their core operations including scope of services, adoption of technology, cost of production, distribution streams, competition, intellectual property, and other key areas (Howley, 2005). All the while CTCs are working to meet the mission of serving the community to improve access equity to media technologies. From an ecological perspective, understanding an organization's capacity to adapt to this changing environment is meaningful in order to learn how they create and maintain innovative educational contexts for multiple literacy learning.

Digital media arts production experiences can potentially provide very effective participatory learning experiences depending on multiple factors (Halverson, et al., 2009; Itō et al., 2009). The effectiveness of the program in providing multiple literacy learning is based not only on conscious curriculum designs with objectives, activities, and assessments, but also depend on the program management, instructional quality, themes, and participant engagement. Teaching and learning through digital media arts production involves experiences in learning about processes as well as about constructing products. Through those experiences, participants

exercise a wide range of knowledge and skills, as well as demonstrating the less tangible attributes of attitudes, values, and ethics. The outcomes of the teaching and learning through media production are the experiential accomplishments along with the creation of digital art expressions. Participants gain an understanding of the production process as well how to create thoughtful media content. Production studio activities may vary based on the degree of emphasis placed on the process or product.

The challenge of this study was to create a means for determining if and how CTCs were providing the multiple literacy learning experiences students needed to participate in the 21st century participatory learning culture using digital media arts; and, if they were, how was it being done from an ecological perspective. The primary goal was to identify characteristics of ML learning taking place in a CTC as students engage in digital media arts production. The secondary goal was to develop a benchmark case for evaluating multiple literacy learning through digital media arts in a community context.

The overall study objective was to develop and pilot a protocol to be used to identify characteristics that fostered multiple literacy learning within a CTC. The Phase One objectives were to create a protocol including indicators of multiple literacy, a site selection matrix, and a data collection instrument. In Phase Two the objective was to pilot the protocol including selection of a site and one site visit. The primary outcomes of the study were a piloted protocol to identify characteristics within one CTC where multiple literacy learning was taking place; and, to gather evidence to determine if and how one CTC provided multiple literacy experiences through the production of digital media. The secondary outcome was an ecological profile of one CTC that would serve as the first case for future comparison.

Understanding the nature of the socio-cultural paradigm shift to participatory learning will expanded the meaning of multiple literacies and give vision to greater opportunities for expanding learning through digital media arts in alternative public education contexts. Educational studies as a discipline encompasses the developmental, cognitive, and socio-cultural aspects of human learning. My thesis emerged from a convergence of these areas with an investigation of developmental characteristics of youth in a participatory culture; identification of ways of teaching and learning multiple literacies; and, attainment of digital social justice through community-based technology.

Chapter one was the presentation of the purpose, issues, and assumptions that formed the basis of the study. Participatory learning culture involves developing multiple forms of literacy needed in the 21st century and that can be taught digital media arts production and is taking place within community media arts organizations. CTCs are complex, varied, and changing organizations. The challenge of the study was to create a means for determining if CTCs are providing these experiences and the characteristic that foster multiple literacy learning experiences needed in the 21st century participatory culture. If CTCs are fostering this type of learning, how was it done from an ecological perspective? How can educational research move beyond the one-off case study approach that qualitatively demonstrates the richness of these experiences to build a body of cases to explore these forms of learning? The primary goal was to develop a protocol to identify characteristics of multiple literacies learning taking place within a CTC. The secondary goal was to pilot the protocol and create a benchmark case for evaluating multiple literacy learning in a community informatics context as a basis for future case comparisons.

In the next chapter is a review of the literature on participatory learning culture, multiple literacy learning, and community informatics. The current study is positioned within the existing literature as a means of contextualizing its purpose. Chapter three presents the methodological framework and defends the philosophical foundations of this study. Also included are details of Phase One and Phase Two activities. The chapter concludes with a discussion of the analytical framework, process, coding, and tools. In chapter four, Phase One and Phase Two findings are presented. Phase one findings are comprised of the development of the protocol. Phase Two findings consist of data gathered when piloting the protocol including evaluation of potential CTC research sites and one site visit. The ecological case study of Media Bridges, Cincinnati Inc. is presented with findings grouped by organizational, program, and production aspects. Chapter four concludes with the theoretical and practical challenges encountered and a summary of findings.

Chapter five is a discussion of the effectiveness of this protocol in identifying multiple literacy learning experiences within a community technology center. Included are a discussion about piloting the protocol, a critique of the findings, and concrete ways of benefitting Media Bridges as a result of this research. Implications of the study are discussed in relation to social, cultural, and access equity issues. Methodological implications are discussed as related to program evaluation. Educational policy and media access policy implications are discussed as a means of social justice attainment. The chapter concludes with contemplation on potential avenues for future research that include the pragmatism of data management, applications for organizational development and lifelong learning, and systems thinking for designing inclusive multiple literacy learning environments that celebrate a participatory learning culture.

Chapter Two – Review of Literature

The three bodies of literature that were reviewed to contextualize this research were participatory learning culture, multiple literacy learning, and community informatics. All three are rapidly emerging fields of study. Within participatory learning culture is a presentation of how digital media arts and connectivity are changing the ways youth relate to their peers and the ways in which they learn. Multiple literacy learning encompasses how content needs are changing in educational and workforce development to include wider understandings of the knowledge, skills, attitudes, values, and experiences that comprise an educated individual. Community informatics incorporates the sociological, economic, and equity issues associated with providing out-of-school education in technology, media, & critical literacy. This study is positioned as a methodological investigation to find a way of understanding if and how multiple literacy learning is taking place within community technology contexts, specifically media organizations that offer digital arts education.

Teaching and learning in contemporary life includes interactions with the digital world. Research about digital media and learning has emerged from a myriad of fields and disciplines including media, technology, production, computing, storytelling, arts, aesthetics, education, economics, social justice, politics, and many, many others. To contextualize this study, three domains within the literature were investigated: participatory culture, community technology, and multiple literacy learning.

The goal was to organize this review of literature by discrete themes, however the themes of community media intertwined with studies of organizational systems designs, while digital education included issues of technological prowess, social justice, and academic content knowledge. Methodologies of evaluation, surveys, ethnography, action research, and multiple-

and mixed-methods studies emerged within all domains. Since this study was designed as a methodological investigation, the review of literature focused a great deal on methodologies, as well as on situating the study within the contexts of current research in the three overlapping and integrated domains.

Digital media and learning (DMAL) is associated with participatory learning culture and is an emerging field of study with researchers approaching the topic from many social, cultural, academic, and aesthetic perspectives (Gee, 2010; Jenkins, 2010; Livingstone, 2002; Palfey & Gasser, 2008; Prensky, 2001; Tapscott, 2009; Taylor & Keeter, 2010). Community informatics is also an expanding field that has brought together research from the technological and educational literature encompassing social justice, academic advancement, workforce development, and technological innovations (Bradley, 2006; Halverson, et al., 2009; Hick, 2006; Kvasny, 2006; Masters & Nyvist, 2006; Peppler & Kafai, 2007). Multiple literacy learning is a rich and emerging field that encompasses academic content areas, computing, the arts, education, language arts, workforce development, and other fields (Beetham, McGill, & Littlejohn, 2009; Cope & Kalantis, 2010; Geyer, 2010; Livingstone, Van Couvering, & Thumm, 2008; Mahari, 2004; Morrell, 2008; Pinkard & Sweet, 2009; Tierney, Bond, & Bresler, 2006).

Digital media arts education through out-of-school learning is at the basis of this study; specifically investigating multiple literacy learning that took place in a community-based technology organization. The topic emerged from research conducted at the Digital Arts Workshop at the Cincinnati Arts and Technology Center (Arndt & Davis, 2009; Arndt, Davis, & Maltbie, 2009; Davis, Greene-White, Ferdinand, & Santangelo, 2008), where experiences of working with Cincinnati Public School students engaged in digital media arts education and motivated this phase of my research.

Participatory Learning

Digital youth culture has been studied extensively with emphasis on the changing nature of how students are living and learning with information and communication technologies (Ching, Basham, & Jang, 2005; Itō, et al., 2009; Geyer, 2009; Goodman, 2003; Morrell, 2008, Prensky, 2001). The research investigated characteristics of youth social and cultural phenomena evolving in regard to learning, leisure, and community through the use of digital media and technologies. The research was primarily conducted using case studies, ethnographic, survey, and meta-analysis methodologies.

The MacArthur Foundation's Digital Media and Learning (DMAL) project was a multi-year, comprehensive ethnographic initiative that studied how teaching, learning, communication, and leisure behaviors were changing because of advances in ICTs (Itō et al., 2009). Researchers looked at the social, exploratory and in-depth investigations that youth undertook during digital engagement. Multiple ethnographic studies investigated the phenomenon associated with digital youth behaviors in and out of school, as well as engagement in a range of social and academic activities, and for students across the socio-economic spectrum.

The DMAL studies were designed to investigate characteristics, behaviors, preferences, and perceptions from the perspectives of students with respect to their experiences in homes and neighborhoods, institutional spaces, online sites, and interest groups. The research teams focused on how youth, as fully formed individuals, were capable and acting with agency in shaping their cultural and social experiences. Overarching analysis was conducted with the premises that although youth do not hold all the answers to how to handle this new era in learning, and sometimes seem to threaten the existing social and cultural systems, it was crucial to listen carefully and learn from their experiences of growing up in this changing media ecology. The

study organized findings related to learning, education, and public participation. Key to their findings was that although socialization and play were culturally valued, participation in serious, guided engagement was possible in a variety of educational settings.

Research into gaming and game development has become a central element of participatory learning cultural research as well as becoming an important part of the broadening participation in computing themes with the objective to move underrepresented populations of computer users to becoming computer developers (Gee, 2009). The developers of the popular teaching software program, Scratch, conducted an ethnographic study at a South Central Los Angeles Computer Clubhouse, a community technology center serving more than 1,000 Latino and African American youth. Scratch is a visually oriented computer software program, developed by the researchers at the Lifelong Kindergarten Group in the MIT media Lab. The software has prepared components, or building blocks of programming, and has a gentler learning curve so novice users can create content with greater ease than with other programming software. Peppler and Kafai (2007) studied how the Computer Clubhouse used the Scratch programming language to engage the youth in video game production as a means of investigating new media literacies and participatory learning culture.

Computer Clubhouse is an organizational structure that has become a template for afterschool centers internationally designed to serve youth technology needs in challenged communities. The study looked at youth accomplishments in an informal educational setting as a place where youth developed creative projects with minimal direction. These youth created media comprised of a range of "texts," written, visual and oral, and that demonstrate the literate practices in their cultural and social contexts.

Researchers used observational methodologies, collected and analyzed artifacts and conducted interviews. They highlighted three examples of how the youth used Scratch in ways that demonstrated characteristics of participatory learning in a community technology center. The first illustration was of a 17-year-old Latino male video gamer who modeled his work after a popular fast-paced two-player action game. The participant fashioned the game's controller programming as well as the visual aesthetic to model the original game's characteristics, all the while asking his fellow gamers for feedback on his designs. This demonstrated he was self-motivated to develop his technical prowess and to communicate his vision to his peers, as well as to being responsive to user feedback. He redesigned his program several times to refine the avatar's movements and to improve the experiences the gamers had when playing in his created environment. In a second example, a 12-year-old African American girl used Scratch to create a music video in which she replaced images in a music video with the lead singer, pop music star Gwen Stefani, with her own image and images from her neighborhood as well as from the UCLA campus where she hoped to attend college. The young woman closely studied the song's text, decoded the meaning, and then translated the themes and meaning into images that reflected her own interpretation of her own life. The media mix that the young woman created was shared on the Computer Clubhouse website, where she became a contributor in participatory learning culture and where others responded with commentary on her choices.

The third illustration in the study was a project developed by a young man of mixed ethnicity, Latino and African American. His work was an example of the Computer Clubhouse's *Low Rida* culture, where the youth inserted an image of an expensive car along with his own image to create a virtual space where he owned his dream ride. The young man created the controls, using the Scratch software, to mimic the real-world hydraulic controls that manipulate

low rider vehicles. This project earned him respect among his peers and reflected the value of informal learning on utilizing cultural texts to create meaning in new ways. His project stretched the use of Scratch and built another way for the community of novice computer users to build their skills as well as to contribute to a socially valued aesthetic. The study authors discussed how the context, the Computer Clubhouse, while it was an informal learning center that provided valuable technology access for youth, it was not designed organizationally to guide their participation in developing technological skills nor to develop the media literacy skills that would help the youth understand the larger contexts of their work. They stated that additional research into informal, community-based digital media education using Scratch was warranted.

Multiple Literacies

Much of the multiple literacy research is based on case studies taking place in out-of-school learning contexts that integrate digital media technology into academic, social, and cultural programs. While the studies are mainly qualitative, evaluation, and case study methodologies, studies also utilized action research methodologies as a means of engaging students to develop multiple forms of literacy.

In research on critical literacy and urban education, Morrell (2008) presented a series of case studies on classroom- and community-based teaching experiences that were organized around three related themes: teaching popular culture in secondary English classrooms, conducting community-based research with urban youth, and, cyber-activism.

The case studies were conducted at three different sites spanning a twelve-year period, at two urban high schools and one summer seminar for teens held at the University of California Los Angeles. The two high school locations (North and South high schools) were comprised of groups of ethnically diverse students. Students from South High were academically far behind in

standardized achievement levels. The students from North High had better performance scores in the aggregate, however the segment of the student population that were of an ethnic minority academically performed far below their peers. North High conducted a series of classroom-based studies employing a critical pedagogy of popular culture. South High was a cohort-based four-year program in partnership with the school district and a local university to offer specialized college-level humanities coursework and a summer seminar.

The summer seminar was designed around two primary goals: to teach students what the research team termed *academic literacy*, and, to have the students, teachers, and parents engaged in community-based, praxis-oriented research, around larger social justice issues that included literacy as well as educational justice issues. The seminars exposed the students to college level course work in critical studies, law, popular culture, educational sociology, and critical qualitative research methodology. The critical literacy themes were the foundation of the programs, and functioned as participatory action research with students investigating themes that were relevant for their educational and community wellbeing. Their case studies were encapsulated in media pieces, representing their learning about media literacy as well as issues of social justice. While this was not technically a longitudinal study, the seminars ran for six summers and the study design allowed for comparative analysis from year-to-year.

In a study that integrated digital media arts with critical literacy education in multiple disciplines, Goodman (2003) developed the community-based Educational Video Center, a program with action research opportunities for urban youth. The design of the project had students working as apprentice teachers to gather ethnographic data on the public schools. Through the process of selecting topics and asking questions, the students learned background research techniques. By reaching out to community leaders on relevant topics, students learned

about the constructs of their community and how leadership roles were organized. Goodman reflected on the challenge of integration of media education into the school curriculum.

> In the common vocabulary of education, schooling, literacy, and the printed word are still woven together tightly as rope. So when one speaks of teaching visual literacy, juxtaposing language and images, it is still as if one is tearing one fiber apart from another and threatening to cause the whole thing to unravel (p.101).

Throughout the process, students learned how the teachers provided instruction as well as learning the challenges the teachers faced in managing classrooms. Through participation in production processes, they learned practical organizational and technological skills, and applied them in a meaningful project. By developing interviewing skills, the students learned how to develop focused questions, to speak with people outside of their social circle, and to construct narratives in written, spoken, and visual forms. Goodman's research was designed as multiple case studies within one CTC that was designed to support multiple literacy learning opportunities through media production.

In a large-scale study of learning literacies, Beetham, McGill, and Littlejohn (2009) identified characteristics within educational curriculum related to literacies in multiple domains. The study was developed to learn about the organizational underpinnings that support digital learning literacies in higher education in the United Kingdom. The goal was to audit institutions to identify how learning literacies were being taught and then present a collection of case studies. It was initiated to provide a better understanding of the nature of learning literacies, how they are evolving, how requirements are changing, and how they may be supported in different contexts.

They conducted a three-phase study designed to define learning literacies, identify organizational evidence, and seek exemplary practices. In the first phase, Beetham, McGill, and

Littlejohn (2009) reviewed digital and media literacy competency frameworks found in UK, US, European, and Australian higher educational institutions. They investigated the changing learner requirements, backgrounds and expectations; changing requirements of disciplines and professions; changing needs of employers, communities and the wider economy; and the changing information and communication technologies. This phase of the study established a framework of competencies using the literacy categories of meta-cognition, academic practices, information literacy, media literacy, ICT/digital/computer literacy, employability, and citizenship. The framework defined the specific capabilities, basic practices and digital practices within each literacy category.

In the second phase of the study, an instrument was developed based on the questions: what learning literacies are visible in policies, strategies, service level agreements; what learning literacies are supported by central services (e.g., library, learning development centers); and what learning literacies, if any, are actively embedded into subject curricula? Institutional auditors were recruited from organizations with programs that expressly stated that digital literacies were a priority in their institution. In the third phase, in order to gather exemplary cases, the researchers sought submissions using guidelines distributed through a variety of mailing lists with a request for best practices in learning and digital literacies support. The cases were collected and presented on a wiki to serve as exemplars of digital learning literacy education.

The literature reviewed here represents a wide range of methodological conventions germane to the various disciplines with associated terminology, and epistemic traditions. Looking mainly at socially-framed research questions, the majority of the studies took the form of qualitative and multi-methods inquiry through surveys, interviews, observations, document review, content analysis, electronic discussions, field notes, usage logs, extant data, pre- and

post-data, and help desk logs. Related to the nature of socio-technological inquiry, many studies took a multi-methodology design with on-line website analysis as well as networked discussions consisting of relevant elements of the data collection process.

In a meta-analysis of out-of-school learning conducted by the Harvard Family Research Project (Weiss, 2006), 315 programs were analyzed to identify various evaluation methodologies. The majority utilized implementation-based methods that derived information rich cases through ethnographic and case studies, participatory approaches, or data collection procedures. A few utilized quasi-experimental designs with pre- and post-tests. The Fifth Dimension Project, compared participants with non-participant data.

In a large-scale research project that took a comprehensive organizational analysis approach, The Fifth Dimension (5-D), a University of California Links project, was an afterschool program that provided game-based, literacy learning experiences to at-risk primary school age youth, as well as functioning as a training facility for pre-service teachers (Cole, 2006). The program evolved into a model that has been used internationally for informal education in under-resourced communities. The program design was based on engagement through immersion in fantasy-related play that was a combination of computer-based and live action activities mediated by adult leaders. The goal was that the activities could be successfully implemented at centers having a range of technological resource levels from low to high. Multiple centers were paired with universities to provide a basis for researching the experiences, a forum for undergraduate pre-service teachers to work with youth in an innovative educational setting, and a way to utilize fantasy and gaming to engage students in multiple literacy practices. The research conducted was evaluative of student performance measures of undergraduates as

well as youth participants, assessment of program objective achievements, and utilized a quasi-experimental study design (Weiss, 2006).

Gallego, Rueda, and Moll (2005) studied elements of the Fifth Dimension sites as related to the challenges of conducting educational research in informal settings. There were specific structural elements consistent across centers, as well as specific research foci based on the discipline of the principle investigator directing the site. There were general principles that were foundational to the Fifth Dimension program structure, and were organized under three categories of structure, participation, and learning. Structural elements include an emphasis on interactive technologies, including computers, telecommunications, and multimedia. There was a mythical/virtual entity that was an avatar that served as the host and was used to stimulate, amuse, and coordinate activities through a telecommunication system. There was a focus on diversity of goals, multiple ways of achieving goals, and diversity of the kinds of literacy promoted. Participation elements included activities that were a mixture of play and education. The play was so the children would participate and attend the program willingly as there were no grades issued associated to their school performance. Activities allowed children a substantial element of personal choice and self-direction within the overall structure to promote a sense of development of level of expertise. Elements of the Fifth Dimension program included an understanding that learning was an on-going active process where adults work alongside children as co-participants, not as directors. The centers were an environment of dense, authentic problem-solving opportunities and communication of the process as well as the products of problem solving. Children were encouraged to describe, through written and oral language, how they accomplished tasks, not as a rigid requirement but as an organizing principle.

There were other organizational principles common across the centers and that defined them as Fifth Dimension sites (Gallego, Rueda, & Moll, 2005). Some of these included schedules, artifacts and activities as well as record keeping devices such as logs and mazes, that tracked participants' levels of achievement. Computers and telecommunication were a key element in the program, although the level of sophistication of the equipment was kept at the low end, so centers could easily acquire it through donations. Internet access was critical to the success of the program to network the sites together, and to connect each one with the overall consortium. Each center had distinguishing characteristics regarding its atmosphere, focus, and culture. Common to all was that the program was held after school. The nature of participation at the sites varied although all include the primary school age participants, undergraduates who were pre-service teachers, a site coordinator, evaluation team members, parents, and visitors. The level of participation varied, but the one common principle is that the children's participation was always voluntary. Site coordinators were the on-going staff for multiple semesters or even years, and undergraduates typically came and went each semester.

The study used a multi-method, multi-level analysis to document the underlying dynamics of specific learning contexts in order to identify generalizable principles while allowing for local variations between sites. The evaluation teams moved between sites and as such developed the strategic methodology for the analysis. The researchers compared the fundamental characteristics that defined 5th-D sites, along with the unique elements that distinguished those sites that were included in the study. They looked at the social and organizational elements of the out-of-school informal learning sites as well as the participation and learning outcomes of individuals.

The design of the Fifth Dimension evaluation was a challenge the research team encountered. They determined that traditional designs would be too narrow to encompass the scope of diversity among the various sites in regard to themes, missions and cultures, even though all were based on guiding, fundamental principles. The solution the team decided upon was to pursue common questions across sites, and utilize common data collection strategies, but allowed for flexibility while striving to capture the common as well as the diverse characteristics.

Methodological challenges were identified and addressed in ways that aligned with the Fifth Dimension design model. The first methodological challenge was how to select the unit of analysis as well as the theoretical framework. The Fifth Dimension sites provided comprehensive environments that allowed for rich educational experiences that could yield individual data on student performance, or data on the process and outcomes of larger groups (dyads, groups of participants such as the undergraduates, or the whole site, or the whole consortium). Gallego, Rueda, & Moll (2005) adopted a framework that allowed for bringing particular elements into the foreground for analysis while incorporating background layers. This allowed researchers to isolate various units of analysis while referring back to the larger contexts.

The second methodological issue they addressed was the concept of insider versus outsider perspectives in data collection. Evaluation traditionally brings an outsider perspective into the environment. In this process, that stance, according to the researchers, was too narrow to cover the unique nature of the various sites and to allow for each center's cultural character to be captured in adequate depth. To remedy this issue, they adapted data collection to draw on both insider and outsider data collection methods. The evaluation team was challenged to decide between gathering information on product versus process outcomes. The issues were to gather

data on the effects of participation in the Fifth Dimension site, such as language development or other literacy measures, and balance that with data collection on how the site functioned as a cultural setting. A multi-method data collection strategy was an outcome of this methodological challenge. A significant issue arose in evaluating the nature of the literacy gains among participants across sites. The nature of the Fifth Dimension program design included the principle of students' voluntary participation and self-selection of activities, so the traditional educational research measures regarding interventions or treatments would not hold. The solution that the evaluation team decided upon was to evaluate the program on a site-by-site basis, measuring the effects of treatments where possible, and to describe activities on a case study basis.

The final methodological challenge in reference to the analysis was regarding intrusiveness of data collection by the evaluation team, as this was seen as potentially disruptive to the sensitive nature of the centers' environments. To remedy this issue, the site coordinators conducted some of the data collection, and some was embedded within the activities to become less intrusive. Data sources the team collected were used to look at the various units of measure—individual, group, program, center, and consortium. Undergraduate data included syllabi from the undergraduate courses along with the students' applications collected to learn how the students viewed their intended participation as well as their match to the site's culture. Student course evaluation surveys were collected to learn about the undergraduates' prior experience working with children, community involvement and experiences working with computers. The undergraduates created field notes on their experiences twice a week during the semester to document their activities and interactions with the students. Interviews were conducted with key participants at each site on a periodic basis, giving the individuals the

opportunity to share reflections on topics that are not often asked regarding site operation and course instruction.

These data informed the researchers (evaluators) on the perspectives of those knowledgeable about the organization, implementation, and routine procedures of the site. Research team field notes were generated from twice weekly site visits. One member of the evaluation team was assigned to each site and routinely visited to become familiar with the operations, participants, coordinators, parents, schedules, and procedures. After each visit, field notes were generated to document activities, changes, and anything related to the use of language and culture at each site. These notes were written from an outsider perspective and combined with those from the staff, coordinators, directors, and other insiders to create a rich collection that could be used to build cultural representation of each center.

Common features across centers were identified, as were unique occurrences. To assess the children's language proficiency, a five-point oral Language Assessment Scale was administered twice a year, rating their performance on five separate aspects. The tasks were embedded within a computer game simulating a newsroom, with the children engaged in fact finding missions that allowed them to be self-directed until they summoned the computerized editor to quiz them. All of these data points were combined to form a site profile written by the evaluation team member that described the characteristic sessions at each site, recognizing that the site profile served as the background to each of the distinct findings from the various units of measure.

An Australia Fifth Dimension (Masters & Nykvist, 2006) project focused on digital media as a means of youth engagement employing a case study design. The Queensland University of Technology implemented the program first as a long form seven-week pilot

program afterschool, and then expanded it to include more students with greater depth of engagement with digital media in a more intense iteration of three weeks, where undergraduates and the children used production tools and collaborative media tools to produce hard copy storyboards that documented student learning, and then used those to convert into animation, and into a compiled DVD documenting the experiences. In the studies that evaluated Fifth Dimension programs relevance was that participation was recognized through analysis at the consortium level, organizational level, the program level, the staff level, the individual level and the activity level. These levels of organization were combined to form an organizational profile that served as the unit of analysis.

Other relevant methodological literature reviewed for this study included a method of selecting research sites was based on website analysis of non-profit organizations' efficacy was drawn from Kenix's (2007) methodology of selecting six categories: a deliberate public sphere, the opportunity for activism, a space for marginalized voices, instantaneous information, advertising revenue, fundraising revenue, and accountability. In a study addressing youth identity portrayals through digital art production in community settings, Halverson (2009) used an analytical framework selecting youth media arts organizations for a study where they conducted content analyzed of the mission statements of 42 organizations for themes of voice as well as those that had explicit references to voice, expression, and a sense of place for marginalized populations.

Community Informatics

Community informatics studies have emerged out of several disciplines including technology, economics, urban planning, the social sciences, and education. Scholars from across

these disciplines apply social science research methodologies to investigate the interaction of people with technology as they approach studies in social and community informatics.

Using an ethnographic case study approach, Kvasny (2006) spent eight months at an urban CTC in a location that was part of a program with 15 centers and a mobile training unit serving more than 5,000 residents. The study collected data over 14 months at the one location. Data collection included document analysis, informal interviews and participant observations. Data consisted of background and historical information gathered through newspaper articles, grant proposals, municipal meetings minutes, and strategic planning documents as well as interviews with staff, instructors and participants. Additional data included classroom observations of an introductory computing course over a fourteen-week period, and conducting multiple informal interviews with the participants. Kvasny analyzed the data using an iterative process, coding narratives onto concept cards, and completing thick descriptions of scenes to build themes and patterns.

In a study of patrons of CTCs in Canada, Hick (2006) conducted interviews with two volunteers, two college students, and the director to learn how CTCs provide various forms of computing access in economically challenged communities. The data were analyzed to determine the ways in which the computers were used at the centers, as well as the clients' abilities to use computers for various functions such as communication, job skill development, seeking employment, enrichment, and entertainment.

In an attempt to formulate a typology of CTC organizational structures, Servon and Nelson (2001), conducted a mail survey of 123 members of the Community Technology Center's Network (CTCNET), and conducted interviews with community technology activists, directors of CTC programs and local officials in Austin, TX, Pittsburgh, PA, and Seattle, WA. They

looked at the structures of specific organizations, the characteristics of the informational technology goal each sought to accomplish. They then defined them in relation to whether the program was considered a stand-alone technology center or was considered an embedded technology program, situated within an organization that provided a range of social service or educational programming outside of technology domains.

To investigate how Internet access was beneficial to the cohesiveness of the community, Dutta-Bergman (2005) conducted a statistical analysis of extant data from the Pew Research Center for the People and the Press. The survey posed a series of questions that aligned with the dimensions of community involvement, community satisfaction, Internet access, and demographic indicators. Using cross tabulation and t-tests, Dutta-Bergman compared communities with and without Internet access to levels of sports league involvement, religious organization involvement, youth group involvement, and community charity involvement. Aligning with her hypotheses, she found that access to the Internet correlated to statistically significantly higher rates of community participation and satisfaction.

In a meta-analysis of studies researching methodologies used to evaluate community networks and community technology centers, O'Neil (2002), compiled studies that gauge community impact in order to develop a rubric for evaluating program effectiveness, community networks, and CTCs. Analyzing twelve CTC studies that took place from 1994 to 2001, O'Neil explained that while the authors of the analyzed studies use the term evaluation, the standards of a formal program evaluation were not necessarily met by all the study designs, some of the studies used the term incorrectly. The selected studies were mainly qualitative case study designs, with a few using mixed methodologies. The goal of the meta-analysis was to develop a methodological tool to be able to conduct more rigorous evaluations of both community

networks and community technology centers. The studies were organized into five areas for theoretical analysis: strong democracy, social capital, individual empowerment, sense of community and economic development opportunities. To build the rubric, researchers analyzed the (then) existing evaluation tools provided by the US Department of Housing and Urban Development, and the Community Technology Center Association (CNET.org) and several others. Based on her analysis of the studies, they used the five areas of theoretical analysis as a structure in which to operationalize the indicators present in each study to determine a measure of community involvement; access facilities; usage information; attitudes and awareness; economic activity; community characteristics; or operation and management. The result was a matrix that organized the indicators within each of the measures and related them to the five theoretical realms. The evaluation tool presented information and technology literacy as one key indicator of community characteristics.

Williams and Durance (2008) conducted a meta-analysis of eight CTC studies, specifically focusing on indicators of social capital acquisition and interpersonal network building. They analyzed finding from surveys to identify the indicators of strong and weak social capital, as well as defining when strong and weak ties were creating bonds among participants with the centers. This study was conducted with the goal of identifying theories across studies that explain the existence of social capital contexts in CTCs and to build a basis for further research.

Studying CTCs from a policy perspective, Kaiser (2005) used multiple methods, analyzing extant survey data from the CTCNET (Community Technology Centers Network, a now-defunct organization) affiliates along with interviewing eleven managers and organizers of CTCs in the Raleigh-Durham, NC area. The survey data were used to discuss the reasons

patrons utilized CTCs. The interviews were conducted to learn how managers perceived how patrons used the centers. Analyses of the data were based on two levels: evaluation of the organizational goals in meeting stated objectives in funding, educational programs, levels of up-to-date technology and community impact; and, how the centers were received by the community through analysis of demographic information and anecdotal reports.

Using a comparative case study methodology, Bruce and Bishop (2008) formed a five step inquiry process to look at cases with themes of literacy and lived experience, community, and technology to exemplify an array of community inquiry projects. They addressed the following focal questions within an inquiry process framework: (1) Ask: How do literate activities arise of experiences in communities, including dimensions of morality and social justice? (2) Investigate: How do people create and live new roles as they appropriate technologies in their lived experiences? (3) Create: How do people create and live new roles as they appropriate technologies into their lived experience? (4) Discuss: How do communities address conflicts or bring multiple perspectives together? What are the reciprocal relations between the individual and the community in these processes? (5) Reflect: How do individuals in communities make sense of their experiences for themselves and for others.

They examined five cases in which the themes of literacy, lived experience, community and technology occurred. Then they used the five elements of the inquiry cycle in their analysis. They used an Internet site to allow the various participants to contribute to the development of the case. This method asked teachers, students, librarians, community activists, scholars, parents and others with lived experiences related to the cases to report what worked and did not work in the various cases using this feedback loop as an integral element to the study. This framework of inquiry incorporated a systems design theoretical foundation developed by collecting information

from participants at multiple points within the community, the organizations, the programs, and the instructional contexts.

In a program that focused on adolescent use of technology resources, Youth Community Informatics (YCI), a collaborative project originating from within the discipline of library and information science (Ritzo, Nam, & Bruce, 2009), studied comprehensive educational experiences, not simply on the attainment of technological skills. They studied the engagement of youth through documentary filmmaking, radio programs about community issues, archived local cultural artifacts, and creating community maps through geo-spatial technology. The curriculum for the program was developed around the inquiry cycle, using a process with the steps that ask, investigate, create, discuss, and reflect (Bruce & Bishop, 2008). Activities were designed so students collaborated to engage in community projects with the intention of developing technology skills, problem-solving, cooperative work strategies, public presentation skills and content specific knowledge.

The YouMedia Center (youmediachicago.org) at the Harold Washington Library in Chicago is a unique youth community technology center designed around the principle research findings of the hanging out, messing around, geeking out themes (Garfin, Koushik, Lee, Lewis, McLean, Pollock, Davidson, & Schell, 2009; Itō, et al., 2009). Designated areas exist where youth play video games, watch DVDs and listen to music. The youth experiment with digital equipment while being supported by mentoring artists, or take courses that provided deep learning into the technical as well as aesthetic mediums. The YouMedia center focused on bringing the opportunity for informal, out-of-school, educational experiences to urban youth while reframing the library experience from one of quiet reflection and consumption of materials, to one of generating material through creative expression.

Survey research into digital youth culture has investigated the kinds of technology used as well as the demographic indicators regarding access in various educational settings. Ching, Basham and Jang (2005) developed a survey instrument to differentiate the types of technology use among young adults to determine if a student's age of first encounter with computers at school had a significant impact on their technology use. A survey instrument was created to capture use of technology for different functions, to measure use frequency, and to account for both the frequency and the motivation or value students placed on their technology practices in different contexts. Questions were asked regarding the students' personal history with emphasis on their early encounters with technology. The survey was administered to 130 young adults under the age of 26 at two mid-western universities. They asked about the specific forms of technology used such as laptops, cell phones and other devices as well as productivity software like Microsoft Office and other more sophisticated web authoring and media production packages. The survey design was quantitative and used descriptive and factor analysis to statistically analyze the results. They used Likert scales to indicate the frequency of use as well as the importance of the various technologies in both school and personal life. The findings were unsurprising as they found males who come from higher income households with home computer access before age ten, had significantly higher levels of technology than other demographic groups. Also, the students' age of first encounter with computers at school had no significant impact on their full-spectrum technological use.

As a means of determining how savvy students were in their use of the Internet, a study piloted an instrument that investigated the relationship between degrees of Internet savvy and variables including age, gender, access, and activities (Geyer, 2009). Using factor analysis, researchers explored dimensions of computer mediated communication, creative expression,

information gathering, Internet fluency, and social communication with scoring placing students in the categories of beginner, intermediate, or advanced user. They found that doing something creative, having access at home, exchanging images, Internet access speed, age, and access at a friend's house had a statistically significant impact on the Internet Savviness scores.

In a large-scale, longitudinal, quantitative survey, Taylor and Keeter (2010), of the Pew Internet and American Life project, surveyed 2,020 adults 18 years and older in the continental United States on characteristics of generations in order to learn how Millennials (Digital Youth) differed from prior generations in regard to education, lifestyles, religious practices and other personal characteristics. They sampled using random digital dialing on both landline telephones and cell phone numbers as the means for reaching Millennials, whose telephone use is decidedly different from prior studies. There were 851 landline interviews and 1,169 cell phone interviews, including 538 respondents who did not have a landline telephone, reflecting another aspect of changing characteristics of social research. Extensive findings included attitudes and behaviors that people of several generations possessed on technological engagement, digital production, and connectivity.

On-line research methodologies are emerging in concert with the digital learning environments to investigate the practices of networked youth. The use of the social media sites has opened up new methodological challenges as well as opportunities. Tapscott (2009) in a qualitative research project that took place on the web in a Facebook community, analyzed narratives of 200 people as well as with the as series of hosted discussions with 140,000 young people termed Net Geners. The findings highlighted Net Geners' fierce independence, free expression, and media consumption. Findings and references were posted on the Facebook site

to provide information loops and to gain additional feedback the participants and utilized the on-line community as a research tool.

In research conducted for the National Science Foundation Broadening Participation in Computing initiative, the Mentoring for Connections to Computing (MC^2) grant provided pre-college computing outreach to at-risk youth through a University of Cincinnati, College of Engineering program. The Digital Arts Workshop took place at The Cincinnati Arts and Technology Center (CATC) as a means of introducing at-risk youth to computing concepts through the digital arts (Davis, et al., 2008). Initially, the program was a weeklong summer workshop for Cincinnati Public School students. An extensive program evaluation was conducted and included observation of the students' interaction with instructors, interviews with the students, as well as administration of a pre- and post-survey (Arndt, Davis, & Maltbie, 2009). The following year, research on the DAW included how the workshop could be aligned with the academic year to expand participation and to better use existing CATC resources. The methodology used in the spring of 2009 consisted of participant observations, pre- and post-surveys, and student interviews (Arndt & Davis, 2009). A key finding was that the organizational structure of the CATC was designed to function in essence as a Cincinnati Public School facility and as such operated under the same curriculum restrictions, limiting multiple literacy learning opportunities.

Ultimately, there is a need for educational systems that allow for experiences so students have the opportunity and the agency to construct their own 21st century literacies, in contexts that allow for exploration, socialization, and in-depth inquiry. At present, public education systems are not designed to provide these experiences. Out-of-school learning through CTCs can potentially fill this fundamental educational lack. Identifying multiple literacy learning

experiences through digital arts production within one CTC is the core challenge addressed by this study.

A review of the literature has yielded a variety of methodological orientations. The phenomenological nature of emerging cultural and social paradigm shifts warrants an anthropologically based case study approach to gain deep understandings. Investigation into organizational structures, informal educational settings, and technology proliferation in community settings warrants designs that reflect evaluation methods. Identifying learning literacies of digital youth in community technology settings warrants a study design that examines the organizational context, the program design, as well as the perceptions of those who are taking part including the administrators, staff, and youth participants. A methodology that encompasses an ecological perspective and is flexible enough to work in a wide variety of CTCs is necessary.

This chapter reviewed three bodies of literature to contextualize this study. See Table 1 to contextualize this study within the literature. Participatory learning culture is the emerging paradigm with knowledge, skills, attitudes, values, and experiences in multiple forms of literacy. Educational systems are slow to adjust to meet these emerging realities. Community informatics addresses the socio-economic and systemic issues associated with access equity and bridging the digital divide. Media arts organizations are providing multiple forms of literacy learning using production for pedagogy and action research to affect social change. Three specific literacies were identified for inclusion in this study: technological literacy, media literacy, and critical literacy.

Table 1. Contextualizing This Study Within the Literature

Literature	Purpose	Methods	Findings	This Study
Digital Media and Learning (Itō, et al., 2009)	Investigate characteristics, behaviors, and preferences of youth in participatory learning culture	Multi-year, ethnographic, case studies with structure of gaining youth perspective	Related to learning, education, and public participation. Socialization and play are valued; participation in serious guided engagement possible in variety of educational settings.	Identified indicators and developed a protocol for consistent case study comparison
Gaming development and literacies (Peppler & Kafai, 2007)	Engagement of youth using Scratch programming language in community setting	Observations, interviews, analysis of artifacts	Social status and peer feedback were provided through networked experiences.	Used video production as means of engagement
Critical and academic literacy. Educational Video Center (Goodman, 2003)	Teaching action research to youth as a means of academic achievement and to attain social justice through media production	Action research projects combined into a series of case studies within one media organization.	Through the series of case studies, the findings showed the benefits of meaningful out-of-school learning on attainment of social capital and the ability of youth to use their voice as a means of civic engagement	Developed a protocol design for consistency of case study comparison
Literacies in multiple domains (Beetham, McGill & Littlejohn, 2009)	Identify how learning literacies were being taught and to provide an understanding of the nature of learning literacies, how they evolved, how requirements are changing, and how they may be supported in different contexts.	Three phase study design reviewed digital and media literacy frameworks internationally; an instrument was developed; submissions recruited from institutions as exemplar of practice.	Developed comprehensive typology of multiple forms of literacy learning within institutions.	Modified elements of this typology to include as indicators of multiple literacy learning
Critical literacies and academic literacies (Morrell, 2008)	Teaching popular culture and conducting community-based research methods	Multiple case studies on student-led action research projects with media productions as outcomes. Several years of studies, but not longitudinal.	Students were engaged in the process of investigate critical literacy as well as in the process of producing media with societal impact.	Used a consistent protocol for a case comparative method across years
Harvard Family Research Project (Weiss, 2006)	Evaluation methods of out-of-school learning programs	Meta-analysis of 315 programs to identify evaluation methodologies	Majority were rich case studies, participatory approaches. Some were quasi-experimental.	Modified program evaluation methods to incorporate ecological context

Literature	Purpose	Methods	Findings	This Study
Fifth Dimension Centers University of California Links Project. (Gallego, Rueda, & Moll, 2005)	Develop an Evaluation methodology to form consistent profiles across like programs in different centers	Internal and external evaluators; mixed methods; units of measure were individual, group, program, center, consortium	Profiles of each site were generated with background and foreground units of analysis to isolate aspects that are unique and allow for aspects that are consistent.	Builds a profile of organizations with similar missions, but unique compositions
Australian Fifth Dimension project (Masters & Nykist, 2006)	Evaluation methodology	Case study investigating at the individual, staff l, program, activity, and consortium levels.	Utilizing a multi-level approach, a comprehensive organizational case study was devised	Compared unique organizations using similar indicators possible if protocol is successful
Non-profit efficacy in media organizations websites (Kenix, 2007)	Site selection based on criteria	Analysis of documents and interviews	Six categories: deliberate public sphere, opportunity for activism, space for marginalized voices, instantaneous information, advertising & fundraising revenue, and accountability	Used this method to aid in site selection
Media arts organizations site selection (Halverson, 2009)	Youth identity portrayals	Content analysis of mission statements	Selection based on missions with explicit expression of identity.	Selected sites based on mission of technological, media, and critical literacy
Community informatics for social justice (Kvasny, 2006)	Interactions and outcomes resulting in increased self-efficacy and social capital	Ethnographic approach building a case study using document analysis, participant observation, and interviews	Use of technology alone did not increase efficacy, but required access to educational supports that may or may not be provided	Expanded the ecological approach by tinvestigation beyond program-based findings
Community informatics (Hicks, 2006)	Effective use of computer in community context	Ethnographic case study	Described use of computers for enhancement of individual wellbeing.	Used a consistent protocol
Community Technology Centers (Nelson, 2001)	Characteristics of CTCs	Mail survey of 123 CTCs	Embedded and stand-alone, with and without social services	Investigated organizations as well as programs and instruction
Internet access Pew Research Center (Duta-Bergman, 2005)	Community cohesiveness and internet connectivity	Survey on dimensions of community involvement, satisfaction, Internet access, and demographic indicators	Access to the Internet was correlated statistically significant to higher rates of community participation and satisfaction	Assumed the community as one aspect of the ecological context
Evaluation methods of CTCS (O'Neil,	Understanding methodologies used to	Meta-analysis of twelve studies	Created a rubric for evaluating community	Incorporated rubric concept

Literature	Purpose	Methods	Findings	This Study
2002)	evaluate CTCs and community networks		involvement, access facilities, usage information, attitudes and awareness, economic activity, community characteristics, and operation / management	into selection matrix aspect of protocol
Social Capital and CTCs (Williams & Durrance, 2008)	Strong and weak social capital attainment	Meta-analysis of eight CTC studies	Identified theories and developed indicators	Identifiedmultiple data points that can be used to determine social capital
CTCs and Policy (Kaiser, 2005)	Reasons why patrons use CTCs	Survey of CTCnet affiliates; interviews with site managers and patrons	Perception of managers of CTC did not match patrons' perceptions	Used ecological approach to gain multiple perspectives
Literacy and community technology (Bruce & Bishop, 2008)	Literacy, lived experiences, and technology	Comparative case study and multiple points of information within the community, the organization, programs, and instructional contexts	Five step inquiry process 1) ask 2) investigate 3) create 4) discuss 5) reflect	Modified information points, focus on multiple literacy v. textual literacy
YouMedia (Garfin et al.,2009; Itō, et al., 2009)	Design of youth-based community media center	Case study	Areas of center aligned with themes of *hanging out, messing around, and geeking out*	Assumed a comprehensive ecological perspective on youth CTC use
Youth technology use (Geyer, 2000)	Relationship between Internet saviness and demographics	Pilot a quantitative survey	Access, creative exploration, and peer collaboration had an impact on savviness scores	Used a mixed methods approach
Youth access to computing (Davis et al., 2008)	Outreach at a community technology center through digital media arts	Multiple methods—pre and post surveys, observation, artifact analysis	Digital media arts experience engaged youth to learn about higher education	Used video production as a prime activity for youth engagement
Youth access to computing (Arndt, Davis, & Maltbie, 2009)	Outreach at a community technology center through digital media arts	Program evaluation using multiple methods—pre and post surveys, observation, artifact analysis	Program evaluation focused on the experiences within one week arts camp; organizational structure was not included	Developed an ecological perspective to incorporate organizational characteristics
Youth access to computing (Arndt & Davis, 2009)	Outreach at a community technology center through digital media arts	Program evaluation using multiple methods—pre and post surveys, observation, artifact analysis	CTC organizational structure functioned as component of Cincinnati Public School rather than stand-alone operation	Developed an ecological perspective to incorporate organizational characteristics

Table 1.

The research on participatory learning, multiple literacies, and community technology is mainly qualitative, ethnographic, and focused in on a specific program or activity. There are challenges in evaluation methodologies that can address variations in different sites and organizations, while conducting the same program as the Fifth Dimension research suggests. The need exists to develop a way to deeply understand learning in a media-rich participatory culture, as well as understanding the ecological forces that surround those learning activities that may or may not have an impact on providing quality experiences. The need also exists to capture the indicators of multiple literacy learning that might be consistent across organizations, programs, and production activities in order to understand when a characteristic is unique or is something that maybe can be replicated in another learning environment. Qualitative data provides rich understanding, while objectively measureable data can provide concrete indicators consistent across cases. The challenge identified was how to develop a way to learn if and how CTCs had characteristics that fostered the multiple literacy learning experiences needed in the 21st century participatory culture. If so, how was it being done from an ecological perspective? The goal was to use the piloted protocol to develop a benchmark case for evaluating multiple literacy learning in a community context, identify characteristics of ML learning taking place in one CTC, and use that first case study as a basis for future comparison. In the following chapter is the research methodology framework developed to carry out this study.

Chapter Three – Research Methods

In a participatory culture, learners are responsible for gaining literacy in multiple areas. This study identified three specific forms of literacy: technological, media, and critical. The purpose of this study was to develop a protocol to find characteristics of participatory culture and multiple literacy learning within a community informatics setting. Participatory learning culture, multiple literacies, and community informatics are emerging fields of study within educational research. Community Technology Centers (CTSs) are complex educational systems each with unique characteristics. There are many potential perspectives that can be taken to understand how multiple literacy learning takes place within a CTC.

This goal of this study was to understand how to identify if a CTC possessed characteristics that fostered the multiple literacy learning experiences needed in the 21st century participatory culture. If so, how was it being done from an ecological perspective?

The primary goal was to develop a protocol including indicators of multiple literacies, a CTC selection instrument, and a data collection instrument including fieldwork processes. The secondary goal was to pilot the protocol to develop a benchmark case for evaluating multiple literacy learning in one community media context that would serve as a basis for future comparison. The following is the methodological framework and philosophical foundations of this study. The Phase One and Phase Two activities are described. The chapter concludes with a discussion of the analytical framework and tools.

Methodological Framework

The study was to develop and pilot a protocol to capture the ecological context where multiple literacy learning could potentially be taking place within one community technology center. In the Phase One activities, the protocol was developed and two instruments were

created. One instrument was the CTC research site selection matrix and the second was the data collection guide. Phase Two of the study was the piloting of the protocol including selection of the site and the fieldwork. Analysis was conducted using multiple literacy learning indicators on the organizational, programmatic, and production aspects of the CTC research site.

Philosophical Foundations

The study framework was based on a pragmatic worldview (Creswell, 2009) and used methodological pluralism (Moses & Knutson, 2007) as a foundational premise. The pragmatic perspective acknowledges that research takes place in social, historical, cultural, political, economic, and other contexts, and as such, pragmatists engage in research conscious of the wide range of relevant perspectives. The stance is pluralistic, solution-oriented, and practical. Methodological pluralism recognizes that participants' perspectives may change based on the positions each occupies in any situation, and that the epistemic worldviews of participants shift as their positions shift. Recognition of various positional perspectives and resulting epistemic assumptions add depth to the findings. Pragmatic research design assumptions include recognition that sound operational frameworks guide the process and provide a means for predicting the attainment of desired goals, while allowing room for discoveries that emerge in unpredictable ways (Creswell, 2009).

Definition of mixed methods research. Mixed method (MM) study designs seek to answer both confirmatory and exploratory research questions (Teddlie & Tashakkori, 2009). MM research designs are traditionally typified by the number of methodological approaches used, the number of strands (phases), the type of integration implementation process, stages of integration of approaches, priority of approaches, function of the research study, and, theoretical perspectives (Cresswell, 2009). In a simplified typology grouping, the term *families* is used to describe groups

of evolving MM methodological designs based on the integration of data, the number of approaches, number of phases, type of implementation, and stage of data integration (Teddlie & Tashakkori, 2006). In determining how a study design meets specific the criteria, the research process is analyzed at the conceptual stages, experiential stages (methodological and analytical), and inferential stages of the study. Key determinants include the data integration across various stages as well as the number of phases (strands) undertaken. The foundational theoretical premise of MM research is the iterative use of the Inductive-Deductive Research Cycle across and within stages to answer the guiding research questions, as well as to identify relevant emerging questions.

Design. The methodology in this study utilized was a quasi-sequential, mixed methods, multi-strand, conversion design conducted in two phases as is represented in Figure 2. It was based on a sequential, mixed methods, multi-strand, design (Teddlie & Tashakkori, 2009) and is influenced by a responsive evaluation model that orients the research directly with program activities and focuses on actions as well as intent (Owen, 2006). In this model, the researcher responds to inquiries for information and values the perspectives of the stakeholders when reporting the success or failure of the program. This approach was designed to assist through reporting, both formally and informally, to help the practitioner reach new understanding, and to use the stakeholders' and researcher's craft knowledge (and practices) alongside the findings.

Conversion of qualitative data is a commonly used analytical method that includes—among many other techniques—frequency counts of coded narratives to create quantifiable findings. Creating rich descriptive narratives through analysis of quantitative data is another very common conversion practice. Functioning from a pragmatic epistemological stance, data conversion and integration were undertaken when common-sense opportunities arose within the

study context. Qualitative and quantitative data were integrated and converted during the conceptual, experiential, and inference stages of the first phase to inform the experiential and inference stages of the second phase. The mixed methods design used integrated qualitative and quantitative data in the first stage of the study, and then applied the integrated data to confirm and explore the guiding research question with the second stage.

Phase One Methods

In Phase One, the activity was to devise the multiple literacy indicators and to two instruments. The CTC site selection matrix was designed as a means for organizing and assessing criteria on potential research sites. The comprehensive data collection guide was designed to gather information on the selected CTC to develop the profile. See Appendix A.

Indicators of multiple literacies. To create the indicators used in this study, I used the KSAVE model indicators of knowledge, skills, attitudes, values, and experiences related to 21st century workforce educational needs The indicators were grouped into ways of thinking, ways of working, tools for working, and living in the world. They were modified to fit within the ecological context model in alignment with specific organizational, programming, and production activities in a CTC. See Table 2. This shifted the KSAVE workplace skills into multiple literacies potentially found in the community media context to demonstrate specific ways that multiple literacy learning can be fostered

CTC selection criteria matrix. The design of this instrument was based on the need to gather consistent forms of data to select the research site. Criteria were defined with corresponding scales. One CTC would be selected to serve as the study sample that would comprise the unit of analysis. The matrix was organized into primary and secondary considerations.

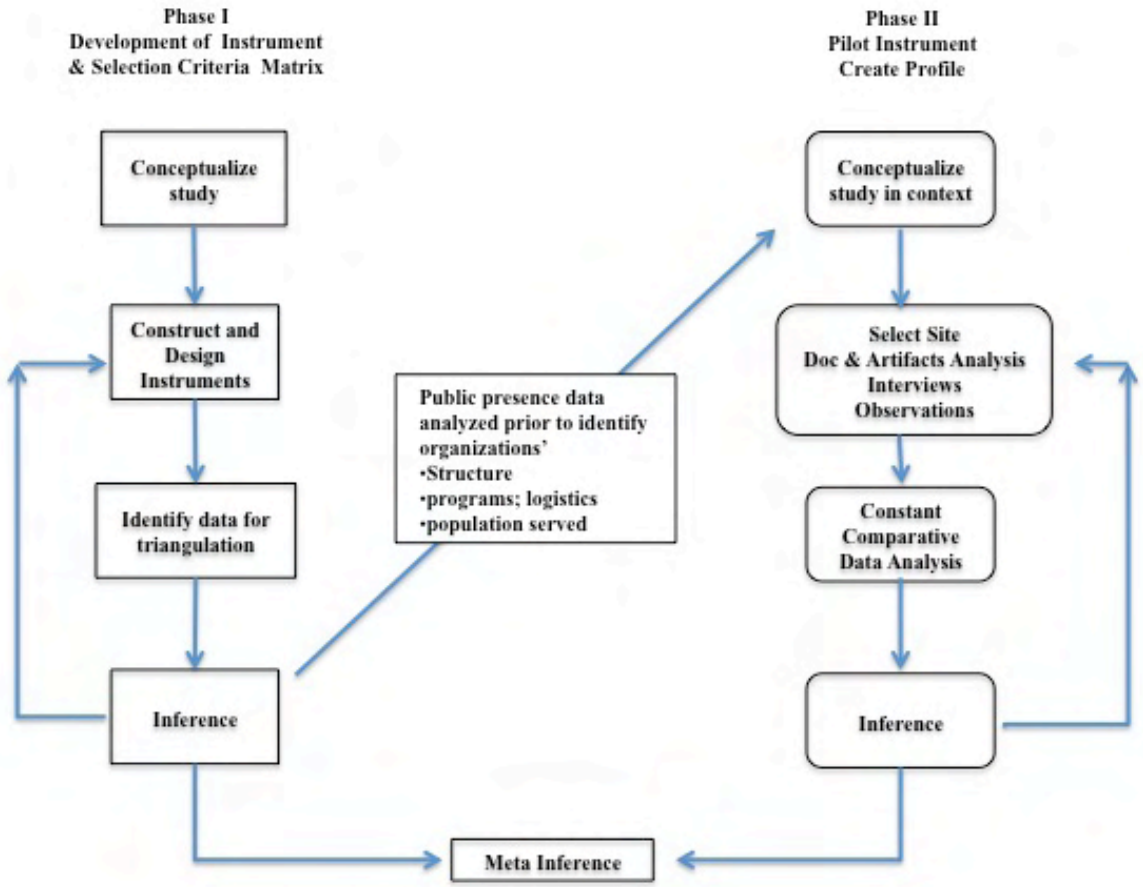

Figure 2. Quasi-sequential, mixed methods, multi-strand, conversion design.

This design was based on a model of the sequential mixed-methods design found in "A General Typology of Research Designs Featuring Mixed Methods" by C. Teddlie & A. Tashakkori, 2006. *Research in Schools, 22,* p.13.

Primary considerations were the organizational structures and the types of programs offered. Specifically, the CTC had to be a community media arts center that offered youth digital media arts programs. The secondary considerations were divided into pragmatic, theoretical, demographic, and instructional characteristics. The pragmatic concerns were the geographic location, the length of time the program ran, the degree of access to the site, and the themes of the enrichment programs that were offered. The theoretical concerns were the CTC's business model, the organizational structure, the program design, and the means of instruction. The demographic concerns were the nature of the community's challenges, age/grade level of students, the populations served, and the locale (urban, rural, suburban). The characteristics of the program were a consideration based on the form of digital media that was offered—video, film, photography, gaming, or audio.

Data collection instrument. The purpose of the data collection instrument was to capture a range of indicators to determine if multiple literacy learning was taking place within one CTC. The instrument was divided into three sections: organizational data, program data, and instructional/production data. These divisions were consistent with the ecological participation model.

Organizational data. This section was designed to collect general information about the CTC including contact information, the mission statement, brief history, and demographic information about the community, financial data, populations served, and publicity. Several additional data points were identified during the process to help develop a more comprehensive picture of the organization including functionality of the website, methods of innovation adoption, community engagement, unique organizational challenges, and strategic development plans.

Table 2: Indicators of Multiple Literacies

KSAVE Dimensions	Multiple Literacies	Levels within CTC		
Ways of thinking		**Organization**	**Program**	**Production**
Creativity /Innovation	*ICT/Info*	• Interesting projects • Innovative design • Novel plan of execution	• Interesting projects • Innovative design • Novel plan of execution	• Interesting projects • Innovative design • Novel plan of execution
Critical Thinking	*Media*	• Goal, objective, method, budget, evaluation, impact plan. • Mindful of history and contexts	• Goal, objective, method, budget, evaluation, impact plan. • Mindful of history and contexts	• Goal, objective, method, budget, evaluation, impact plan. • Mindful of history and contexts
Meta cognition	*Critical & Meta*	• Systems design • Assessment and evaluative	• Systems design • Assessment and evaluative	• Systems design • Assessment and evaluative
Ways of working		**Organization**	**Program**	**Production**
Communication	*ICT/Info*	• Active voice in the field • Utilizes, develops, and contributions knowledge from many sources. • Voice in community • Education is a core function	• Active voice in the field • Utilizes, develops, and contributions to their field • Voice in community • Education is a core function	• Active voice in the field • Utilizes, develops, and contributions to their field • Voice in community • Education is a core function
Collaboration	*Media*	• Partnerships locally &globally • Multiple active social networks • Media is core business function • Key in providing community facilities, equip & support.	• Creates opportunities • Provides access to existing networks of social & cultural capital • Designed for interaction, presentation	• Brainstorming • Production teams • Differentiation of labor • Feedback designs • Opportunities for multiple roles
	Critical	• Mission of social justice • Access and equality are goals • Designs of inclusion	• Mission of social justice • Access and equality are goals • Designs of inclusion	• Mission of social justice • Access and equality are goals • Designs of inclusion • Process and product driven
Tools for working		**Organization**	**Program**	**Production**
Info literacy	*ICT/Info*	• ICT/info part of daily operations • Uses, modifies, develops, contributes tools • Gathers, processes, synthesizes, shares information	• ICT/info part of daily operations • Uses, modifies, develops, contributes tools • Gathers, processes, synthesizes, shares information	• ICT/info part of daily operations • Uses, modifies, develops, contributes tools • Gathers, processes, synthesizes, shares information
ICT literacy	*Media*	• Public data is informational with dynamic content • Innovation adoption	• Message and purpose of program is clear, strong, and heard by intended audience	• Message of programs is clear, strong, and heard by intended audience
Active Citizenship	*Critical*	• Shared networks of community spaces with contribution and development through multiple participants.	• Shared networks of community spaces with contribution and development through multiple participants.	• Shared networks of community spaces with contribution and development through multiple participants.
Living in the world		**Organization**	**Program**	**Production**
Citizenship-local and global	*ICT/Info*	• Social justice driven actions locally and globally • Consciousness of resources • Active in advancement field	• Mission of social justice • Access and equality are goals • Designs of inclusion	• Agency • Learning • Power • Change
Life and career	*Media*	• Contributes work to the field • Fosters those striving to enter	• Exposes participants to options	• Participants engaged in various potential roles
Personal & social responsibility; Cultural & social awareness	*Critical*	• Mission of social justice. • Conscious of own and others cultures	• Mission of social justice. • Conscious of own and others cultures	• Mission of social justice • Conscious of own and others cultures

Program data. This section was designed to hold information about the specific programs offered by the CTC. Brief descriptions allowed for the contextualization of the program being observed within the range of other offerings.

Production and instructional data. This section was designed to capture the instruction and production experiences that took place during the one program selected for observation during the site visit. This section was designed to collect information about the instruction, production processes, and skills, as well as related activities and participant information.

Phase Two Methods

The Phase Two activities were to pilot the protocol. This included the use of the selection matrix and data collection instrument: (1) to gather data to select a CTC with the potential for providing multiple literacy learning experiences, and, (2) to guide the site visit. Data used to select the CTC and to create the ecological profile came from multiple sources including public information, interviews, observations, digital artifacts, and internal documents provided by the organization.

CTC selection. The goal was to use the CTC selection matrix to identify one site as the most desirable option. The decision was based on the one that best met the criteria, with two other sites selected as back-up options. The initial search for the CTCs was conducted using the National Association of Media Arts Councils member organization directory (NAMAC.org). Using a keyword search with the term *youth media* in the NAMAC directory, the organizations were narrowed down based on the primary criteria on the CTC selection matrix. Information on the organizational structures of the CTC came from the Alliance for Community Media (ALLIANCECM.org) national map of media organizations developed based on a NAMAC mapping tool. The map featured the media organizations with images identifying the organizations by different management types including non-profit agency, governmental agency,

educational institution, and multi-jurisdictional institutions. On the NAMAC website, the organizations were identified with pinpoints on a map illustrating each by location to narrow the organizations to those located within a fifty mile radius. These criteria led to the selection of five potential CTC sites. Details on the site selection data are in Chapter Four – Findings.

Site visit. The site visit took place over a three-week period in August 2010. Prior to the visit, IRB approval was obtained. The first week on-site consisted of interviews with the administrative and instructional staff. The second week was the observations of the youth video production camp, interviews the students, with an informal focus group with students and parents, as well as the gathering of internal documents. The third week consisted of follow up interviews.

Interviews. The interviews were conducted with instructional and administrative staff. Interviews also took place with youth camp participants. Consistent with mixed methodologies, follow-up interviews with the staff were conducted to expand on themes that had arisen during previous interviews and during the camp. Interviews were audio and video recorded.

Participants. The entire unit of analysis was the community media center. To gain a sense of that ecological context, key informants were selected at the organizational, program, and production levels. Media Bridges is a CTC made up of many people including a staff of approximately 15, to hundreds of producers, and untold numbers of viewers. As with any group, the nature of the organization is dynamic based on the constitution of its members. For this study, interviews included the executive director, the development director, the education and not-for-profit services director, the media specialist who taught the camp, and one of the organization's key technical staff. Job descriptions were collected for the staff interviewed and used as a basis for developing individualized questions relevant to their roles. The children in the video camp were also considered key informants. The culture of the organization is based on

presentation on media, so there is an explicit culture of open depiction of participants' identity. This cultural norm was factored into the IRB approval and cleared by all participants. There are many, many people associated with Media Bridges that could potentially have had an influence on building an understanding of the ecological context including board members, other staff, and other groups taking part in other programs. For this study, these were the key informants selected. Details on the participants can be found in Chapter Four – Findings.

Observations. Observations were conducted of the classroom/studio activities as the youth took part in the five-day long video production camp. As stated in the IRB protocol, a videographer was hired to tape each day of the camp and the interviews. As the program was a video-based enrichment program, the presence of cameras recording was not an unusual occurrence, so youth were habituated to being observed. Still photographs were also taken during the activities.

Focus group. A focus group was conducted on the final day of the camp with the participants and their parents. It was held as an informal discussion about various aspects of the camp and occurred during the pizza party and video screening session.

Digital artifacts. The main digital artifact collected from the site visit consisted of the final video production. It was written, produced, and edited by the youth during the weeklong camp and facilitated by the instructor.

Internal documents. Internal documents from the organization were requested including budgets, job descriptions, and planning documents. Media Bridges provided research reports from studies they were using to develop strategic plans. These reports included The Greater Cincinnati Survey (Spring, 2010) conducted by the Institute of Policy Research at the University of Cincinnati; and, the Needs Assessment Research Report (May, 2010) conducted by the Bloomstrom Marketing Advisors, Inc..

Analytical Process

The analysis took place to determine if the instruments were successful in capturing data about if and how multiple literacy learning was taking place at Media Bridges. The analysis acknowledged a nesting of participants within multiple levels of the one unit of analysis (Gallego, Rueda, & Moll, 2005) consistent with the ecological model. For instance, analyses of data were related to the organizational level, program level, and production levels of the CTC. See Table 3.

Process. The analytical process included surveying public data on websites, transcribing audio and video interviews, logging activities on observational videotape, analyzing internal documents, coding textual narratives, and coding still photos. Consistent with the study's theoretical framework, codes were grouped around the themes of technological literacy, media literacy, and critical literacy on the KSAVE indicators. The analysis took place in an iterative manner using the Inductive-Deductive Research Cycle, a process closely related to the constant-comparative analytical method. These analytical methods assume that throughout the process, relevant new knowledge would be generated and integrated into the research process. For example, in Phase One, literature reviews of existing taxonomies were analyzed for selection of indicators of the multiple literacies that were used for coding of data collected in Phase Two.

Phase One analysis. Analysis in Phase One addressed how the instruments and the design process of the protocol. The analysis was based on the questions: Were the instruments' design sufficient to collect intended data to select a site and to adequately capture multiple literacy learning activities during the site visit? An instrument designed to select the site would provide data on the specified indicators. An instrument for data collection would sufficiently provide for the collection of evidence of multiple literacy learning. Were the instruments valid? Valid instruments would gather data that could be triangulated from multiple voices and

perspectives. Were the indicators and measures designed in a way to capture intended as well as incidental data on organization, program, and production activities?

Phase Two analysis. Analysis activities in Phase Two consisted of the implementation of the protocol including: (1) analysis of the data for selecting the potential research site; (2) content analysis of public and internal documents; and, (3) analysis of interviews, observations, and the focus group.

Analysis to select site . The choice of the CTC was based on two primary indicators: self-described as a media arts organization; and, providing youth digital media arts programs. The secondary indicators were scales theoretical and pragmatic factors such as location, demographics of population served, organizational structure, additional programming, and community collaborations. Websites were analyzed of the five potential organizations meeting the criteria of offering youth media arts programs to determine if they met the secondary criteria in the selection matrix.

Table 3: Analysis Activities

Phase	Objectives	Data	Analysis
Phase I			
	Develop indicators	Literature on ML taxonomies	Design ML indicator data points for triangulation; validity; reliability; authenticity; creditability
	Develop CTC selection criteria and data collection instrument	Website and document analysis; CTC Website; Guide Star and NAMAC websites); promotional materials; annual reports	Identify theoretical and logistical criteria including organization's mission, structure, programs, populations, timing; locale; access
Phase II			
	Collect pre-selection data	Public data for three CTCs	Screen for CTCs that self-describe as NFP community media arts; offers youth digital arts programs
	Select site	Matrix criterion applied	Meets the two primary criteria; ratings on secondary scales; access granted
	Organizational data	Interviews, internal docs, survey	Coded with KSAVE indicators
	Programmatic data	Interviews, internal docs, survey	Coded with KSAVE indicators
	Production data	Observations, interviews, artifact analysis, survey	Coded with KSAVE indicators
	Community data	Interviews, survey	Coded with KSAVE indicators
Outcomes			
	Validate instrument & protocol	Triangulated points; member checks	Does protocol capture intended data?
	Create ecological profile	Phase I & II data, focus group	Does this profile accurately represent the multiple literacy learning within the CTC?

Table 3.

Analysis of internal documents. Content analysis of the internal documents included searching out themes that aligned with technological literacy, media literacy, and critical literacy. Summaries of relevant findings were incorporated into the organizational profile.

Analysis of site visit data. The analysis of the interviews, observations, and the focus group took place with software for organizing and coding of the findings and logging the observational footage. Theme analysis was derived from narrative summaries generated based on the selected multiple literacy indicators. Codes were applied from multiple literacy indicators at the organization, program, and production levels. The indicators varied slightly during analysis. For example, the indicator for an organizational demonstration of media literacy was slightly different than one for media in program design, or for media literacy in individual student's activity. Data were coded with consistent themes with the intent of utilizing selected indicators to establish validity and reliability of the instrument. Analysis was conducted sufficient to establish the creditability and authenticity of the findings.

The analytical framework utilized in this study was based on the KSAVE framework of assessing 21st century skills (Brinkley, Erstad, Herman, Raizen, Ripley, & Rumble, 2010). This framework organizes skills into ways of thinking, ways of working, tools for working, and living in the world. While the KSAVE framework uses the term *skills*, this study employed the term *multiple literacies*. The KSAVE framework used measurable descriptions of the *knowledge, skills, attitudes, values, and ethics* within each skill (literacy). For example, a skill for creativity at could be a novel plan of execution. The skills that were used by the students in the production included using computing equipment and editing software, developing their own stories, and learning the origin of content materials they appropriated. See Table 2 for indicators used.

Tools. Two analysis software packages were utilized in the study: Transana, an Open Source Qualitative Analysis package; and, HyperResearch. Transana is an Opensource analytical software program with multiple windows to manage transcription, coding, and creating clips of audio and video files for analytical transcription and editing of video for compilations. See Figure 3. Utilizing this software package is relevant for this study as it has potential to be an effective tool for creating documentary footage for media productions. HyperResearch is a comprehensive qualitative analysis software package that has the capacity to allow for coding images as well as narratives, audio, and video files.

The methodological framework presented was a based on a two-phase approach. In Phase One was the development of the protocol including indicators of multiple literacies, a site selection matrix, and a data collection guide. In Phase Two was the piloting of the protocol at one CTC using public data and internal document analysis, interviews, observations, and a focus group. The analysis activities included using the knowledge, skills, attitudes, values, and experiences indicators. In the following chapter are the findings on the Phase One protocol development and on the Phase Two piloting activities.

Figure 3. Transana software was used for video and audio analysis.

Chapter Four – Findings

Through the implementation of the research methods described in the previous chapter, findings were generated on the development and piloting of the protocol. Phase One findings are presented on the development of the protocol including the design of the multiple literacy indicators, the CTC selection matrix, and the data collection guide. The Phase Two findings include the piloting of the protocol to create an ecological profile of one CTC, Media Bridges Cincinnati, Inc. Data are organized to align with the structure of the data collection guide with information on the organization, the programs, and one production experience. Concluding this chapter are the challenges and limitation identified during the study.

Phase One Findings – Development of the Protocol

Phase One findings are presented to determine if the protocol was effectively developed to capture desired data. Findings include the design process for the CTC selection matrix, and the data collection instrument. The goal of the protocol design was to create instruments and processes to learn if community media centers provide multiple literacy learning experiences through digital arts education. The challenges was to develop a protocol that could be used in a variety of agencies and that would capture the unique nature of each while gathering information that could be compared across all of them.

Instrument. The goal was develop a tool for choosing an appropriate place to do the research. The CTC selection matrix was designed to organize the criteria that to choose a research site where multiple literacy learning may be found. See Table 4. The data collection instrument was developed so that the characteristics of the organization, the programs, and individual production experiences could be analyzed. See Appendix A. The findings on the

piloting of the matrix are presented with the Phase Two findings. Next the validity and reliability of the instrument is presented.

Reliability and Validity. The data collection instrument had content validity in that the desired information was gathered based on the analysis using the indicators of technological literacy, media literacy, and critical literacy. The information that was gathered in the instruments was designed to be a collection of both factual data available from public sources as well as subjective information gathered through interviews and observations. The guiding questions were the based on indications of technological literacy, media literacy, and critical literacy. Using the KSAVE indicators as well as the direct quotes from the interviews, there were many examples of multiple forms of literacy. Both instruments appear to be effective, and as such have face validity. Neither instrument can be said to have reliability, as this is a pilot of the protocol. To establish reliability, it would be necessary to repeat the study and compare the results.

Phase Two Findings – Piloting the Protocol

Phase Two findings are presented to determine if the CTC studied possess characteristics of multiple literacy learning experiences. If so, how do they do it? The case study developed in Phase Two will serve as a basis for comparison when using this protocol in the future. Challenges to the development and piloting of the protocol are presented as well as the limitations of the study.

Selecting the site. Using the site selection matrix, five potential CTCs were identified that met the primary considerations of being a community media arts organization and offering youth digital enrichment programs.

Table 4: CTC Selection Criteria Matrix

Considerations	Criteria	Scales
Primary		
1) Organizational structure	Community media arts center	❑ yes ❑ no
2) Enrichment programs	Youth digital media arts	❑ yes ❑ no
Secondary		
Pragmatic		
Geographic location	Travel distance	❑ < 50 miles ❑ 50-99 miles ❑ 100-250 ❑ >250
Scheduling	Duration on site	❑ 1 week ❑ 2-3 weeks ❑ 4-6 weeks ❑ > 6 weeks
Access to site	Receptivity of administration	❑ not receptive ❑ reluctant ❑ welcoming ❑ enthusiastic
Media programs	Community-based themes	❑ yes ❑ no
Theoretical		
Business model	Not-for-profit	❑ yes ❑ no
Organizational structure	Stand alone NFP	❑ yes ❑ no
Mission match	Agency, Learning, Change, Power	❑ Agency ❑ Learning ❑ Change ❑ Power
Program design	Length of program	❑ 1 week ❑ 2-3 weeks ❑ 4-6 weeks ❑ > 6 weeks
Instruction	Credentialing	❑ Artist ❑ Teacher ❑ Teaching-artist ❑ other
Demographics		
Community challenges	Socio-economics Academics	❑ yes ❑ no ❑ yes ❑ no
Young artists	Age level of students/grade levels	❑ < 12 years ❑ 12-15 ❑ 16-19 ❑ >19
Center clients	Ages served/demographics	❑ youth ❑ teens ❑ adults ❑ seniors
Population density	Urban, suburban, rural	❑ urban ❑ suburban ❑ rural
Program characteristics		
Digital Media	Form of media	❑ audio ❑ games ❑ film/video ❑ photography ❑ other_____

Table 4

The five organizations selected were Media Bridges Cincinnati, Inc., Cincinnati Arts and Technology Center, Waycross Media, Dayton Access TV, and Grand Rapids Community Media Center. Applying the secondary consideration narrowed down the options. Based on pragmatic considerations, Dayton Access TV and Grand Rapids Community Media Center were beyond the 50-mile radius from Southeastern Indiana. Cincinnati Arts and Technology Center was eliminated as programs are not offered during the summer and they do not provide video production. Waycross Media was within the 50-mile radius and did offer youth production camps. However, the camps were based around themes other than video production such as fitness, cooking, and field trips with production of documentaries about those activities.

Media Bridges Cincinnati was the overwhelmingly favorable choice based on the primary criteria of organizational structure and programming. It met the pragmatic considerations of location, scheduling, access, and media programs. The theoretical concerns were met with the design of the program, and the mission matched the media literacy themes. They are located within the urban core and offered services to socioeconomically challenged people. The digital media program consisted of a video production course for youth in the summer within the time frame. See Appendix B for details on how each organization was rated based on the site selection matrix.

Ecological Snapshot of a Community Media Center. This profile of Media Bridges is not an exhaustive analysis but rather a snapshot of a moment within a dynamic organization that is constantly evolving. It is an attempt to capture indications that demonstrate if and how multiple literacy learning was taking place within this organization in August 2010. The findings are presented in the same order as the data collection instrument with organizational characteristics, programmatic aspects, and production activities. The study of Media Bridges

includes findings from public and internal documents, interviews with staff, observations of a one-week-long video production camp, and a focus group. See Appendix D for the completed data collection instrument on Media Bridges.

The staff interviewed included the Executive Director, the Development Director, the Education and Non-Profit Services Director, a Media Specialist and Camp Instructor, and Facilities Coordinator and Information Technologist.

Tom Bishop is the director of Media Bridges. He serves as the chief executive of the organization and is responsible for ensuring the organization works to meet the mission of providing the education, environment, and equipment for people to effective communicate through media. Among other responsibilities, he is responsible for creating the budget and developing program policies. He is responsible for developing strategic plans to move the organization forward. He works with the board, the staff, and the community to do whatever it takes to meet the organizations' mission. As a nationally recognized leader in community media, he is active in policy reform movements to defend the rights for public access to the media. He works to lobby for legislation to restore and retain public funding sources and he works to establish net neutrality—a movement to prevent access limitations on the Internet. He previously was director of Norwood Public Access and has been with Media Bridges for approximately seven years. He is extremely knowledgeable about the financial, political, and social conditions needed for the public to achieve equal access to media distribution channels and articulate about what it takes to narrow the digital divide. Through his experiences, enthusiasm, and knowledge, he demonstrates a commitment to addressing the key issues that have an impact in larger forums, and that benefit the people specifically served by Media

Bridges, as well as the general public. In his office, his desk is raised up two feet higher than normal and without a chair, as he is constantly on the move.

Christa Zielke is the development and communications director. Her role is to represent the organization to the public and to develop relationships that are beneficial to the organization. She is very enthusiastic and is a self-described *sound bite machine.* Christa provided a great deal of comprehensive information about the nature, purpose, vision, and culture of Media Bridges. Prior to her position there, Christa worked at several non-profits of various sizes, all committed to supporting social justice issues. In addition to her work with Media Bridges, she is a competitive cyclist and plays on a hockey league.

At the time of this study, Christian Appleby was the education director and the non-profit services director. He has since left the organization. In his role as education director, he organized, taught, and staffed the many production classes. He conducted outreach classes to area high schools and facilitated any education-related programs. He also ran a program for developmentally disabled filmmakers called *Film Outside the Lines.* In his role as non-profit services director, he has worked with almost all of the region's non-profit agencies to produce high quality specialized productions at a discounted rate in Media Bridge's social entrepreneurialism program. This role included management of the process from contact with the client through conception, pre-production, production, post-production, and beyond. Christian's educational background is in filmmaking and he had prior experiences as a media instructor.

Lee Snow is a media specialist and was the video camp instructor. Lee came up through the ranks at Media Bridges and began as an Intern from the University of Cincinnati, Electronic Media program in the College Conservatory of Music. She assisted Christian working as a

producer and teacher, and assists Tom as well as filling in any area where she is needed. In her various roles, Lee experienced working on the reception desk, the help desk, the production floor, working with programming, teaching, producing, and in these roles she worked mostly with the public. She recently provided training for the staff on implications of Federal Communications Commission regulations. For this study, she ran the video production camp where she was the instructor as well as the director of the video project.

Rob Wilson's job is as the facilities coordinator and information technologist. His role is to maintain the computer network and physical plant. He works with the computer systems throughout the organization including the cable station video content system, the production equipment, the network, the radio broadcast system, the audio and video studios, the editing suites, and assorted other technical functions. In his job, he works a great deal with the public as well, trouble shooting any issues that come up regarding technology. He has a background in the for-profit information technology sector, and also worked for a time with the ACORN non-profit housing organization.

The camp participants consisted of six children who were recruited through the Media Bridges website. The children ranged in age from 10-to-12-years old. Amelia was a 12-years-old Caucasian girl who attended along with her 10-year-old sister Heather. Both girls had taken part in theatre camps, and Heather was scheduled to act in a professional commercial the following week. Lenny was a 10-year-old and is a Ukrainian immigrant whose family settled in the Over-The-Rhine neighborhood where he attends the School for the Creative and Performing Arts and studied ballet. Enid was an 11-year-old Caucasian girl who attended with her 12-year-old brother Ryan. They had both attended two Media Bridges video production camps in prior years. Alanna was a 10-year-old African American girl who lived in Anderson and who had not

taken part in a video production camp prior to this experience. These are not the children's real names.

In this study, the term used for adults who participate in Media Bridges' programs is *producers*. The video production camp participants are referred to as *youth, students, or children*. The one-week basic video production camp, for youth age eight-to-thirteen-years-old, was the program observed for this study.

Media Bridges Cincinnati is a not-for-profit community media organization with the mission of providing the education, equipment, and environment to assist people in communicating effectively through media. According to Development Director Christa Zeilke,

> [There is a] simple breakdown of how media is organized and how Media Bridges fits into that structure--you have corporate media and you have independent media and they are kind of two different entities. We are not a large corporate media conglomerate. We are an independent community center that provides access to cable access and equipment. We are not there to put out content. We are there to provide a vehicle, a medium for the community to air their own content.

Media Bridges achieves their mission of providing the education, equipment, and environment to assist people in communicating effectively through media by offering a wide range of programs and services. These include non-profit media production services, free television production training, on-site television and radio studios available for public use, video editing facilities, cameras and production equipment for public use, public access television programming, community internet access computers, and a low frequency public radio station (WVQC FM). They also offer youth programs geared around video production topics, some that take place during the school sessions and others that are summer enrichment programs.

The ways that Media Bridges provides technological literacy, media literacy, and critical literacy and are woven throughout the organization. According to Executive Director, Tom Bishop.

> People come here with a goal, an idea in mind something they want to do, create a video for their church, take up filmmaking as a hobby, it might be to create a studio program where they are going to change the world from behind the desk...all of these things. They come in with their goal. What we help them do is understand both the technology and the methodology behind the technology that is the media literacy element—to let them accomplish their goal. So we not only help them understand how the camera works and how to edit their video, we help them understand how to best make use of those tools, the artistry, the intellectual side of it, the things that allow them to not only use those tools but to be effective in using those tools. Good shot selections, and I know my audience and how to motivate my audience. I can use my creativity to tap into what motivates them and then I can achieve this goal.

Development Director, Christa Zeilke, described the organization in this way in terms of the services, as well as their commitment to providing an avenue for the public to participate in media.

> I think we are a very innovative and unique agency. We offer free equipment, free education, and free spaces for people to get their messages out—whether that is an individual who wants to share their artistic talent, their opinion, their ideas and maybe somebody who wants to promote a cause or an organization or the work that they do. Maybe someone wants to spark dialog. We provide a medium for them to do that. There are not that many places where people can come in and take free classes from

> professionals in the field and learn editing, video production, radio broadcast, and digital photography for free. And then even be given the equipment to make those productions on our stations, on our radio stations, etc. [sic.] So we are really excited about putting those tools in peoples' hands.

The organization works to be inclusive and to promote the abilities of the producers who work with them. They have programs that reach into various communities to support the social, cultural, and democratic aspects of the people with whom they interact. Christa enthusiastically described how the organization serves the public in many ways.

> Working here is really exciting because we kind of ride the fence between a technology agency and a social services agency and an arts agency too. Because you look at media production as media arts as an art form, but then it is also providing people with technological resources and education that bridges the digital divide. So we kind of have these two sides of our identity that I actually am passionate about both of those. I am very passionate about the arts and providing access to technology and education to the community.

While conducting this study, I experienced firsthand the value of the inclusion work of Media Bridges when I hired a videographer to shoot the observations of the camp. During one of the early conversations with the (then) Director of Non-Profit Services and Education, Christian Appleby, I asked if he knew of a videographer who would be available to shoot video of the camp. He gestured to a young man across the room and said "Jarrod could do it." I responded automatically that it was fine based on Christian's recommendation. Later that day, I saw Jarrod's camera work on a documentary about Jungle Jim's grocery store. The footage was great, so I was confident that the decision was correct.

Jarrod apparently has a developmental disability. According to Christa Zielke, the Media Bridges staff espouses a *don't ask, don't tell* policy and so they are not exactly sure of his diagnosis. He became associated with Media Bridges as part of an educational outreach program called *Film Outside the Lines.* This innovative project supports opportunities for Jarrod and his colleagues to create their own media. They write the stories, produce, act, shoot, and edit the work. It is through Film Outside the Lines that Jarrod developed his talents as a cameraman and has become one of the most sought-after volunteer producers at Media Bridges. He frequently accompanies Christian on shoots for other non-profit organizations with the goal of becoming a professional videographer.

My goal was to hire someone to shoot video to use for observations, so that afternoon we worked out a deal for him to videotape the camp and the interviews. The next day I returned with a contract written at a level that Jarrod could comprehend. We sat down and read it aloud together. It spelled out his duties, my expectations, and the compensation he would receive. We both signed a copy. It was on this project that he was hired for his first paying gig as a cameraman. Unfortunately, he was only available for four days due to transportation issues. However, his work was so crucial to capturing important aspects of the project that I later offered him additional compensation and drove out to pick him up myself so that he could shoot the final day of interviews.

Together we captured interviews with Tom Bishop, the Executive Director; Christian Appleby, the Non-Profit Services and Education Director; Lee Snow the Media Specialist and instructor of this particular camp; Christa Zielke, the Development Director; Rob Wilson, the Information Technology Specialist, the focus group, and interviews with the camp participants. Material drawn from these interviews, some audio interviews, observations, public information,

and internal documents constituted the data used in this profile. Next are findings on the organization of Media Bridges, the programs offered, and the specifics on the observation of the one-week camp.

Organization. Media Bridges is a community media center, a community technology center, and a public cable television access site. According to Executive Director Tom Bishop,

> We fit all the definitions of the CTC. We call ourselves a community media center for branding purposes. I mean there are community media centers and community technology centers, I don't know a single community media center that doesn't fit all the qualifications of a CTC. The only difference is there is a greater focus on media production...teaching basic computer education, computer literacy overall, applications, access to the means of production essentially. All of those things are CTCNet [a now defunct professional organization] check off boxes. I don't know a community media center that doesn't. There are straight access television operations that don't fit any of those, but they have a very narrow focus.

The organizational characteristics that demonstrated multiple literacies learning within Media Bridges were evident in the mission and programs, as well as in their means of technological innovations and how they were investigating their next steps. At its core, the organization's culture was one of a staunch commitment to free speech, and using their skills, resources, and talents to enable all people to have access and to contribute to the public media discourse, regardless of their socio-economic circumstances or the content of their message.

Media Bridges is engaged in multiple communities. Their role is that of a community technology center in that they provide the equipment and access to technology to the public that is not available otherwise. They serve to provide voice to the range of ideas that exist within the

public sphere; a voice that is not available otherwise in the community. Development Director, Christa Zeilke, described Media Bridges in this manner.

> Think of Media Bridges as a hive of activity and out of this hive of activity comes information that people want to convey to the rest of their community. So you come into this building and seem to know nothing about media production. But you have an idea or statement or something that you want to say or show or share or discuss. Bring those ideas here. We will give you the free classes, the free equipment, and teach you how to makes those ideas communicate-able through media. Then we will also offer you the venues to air that material, we offer it through four cable access stations, we operate on the Internet and the low power radio station. We provide a venue for them to take that material that they have created and put it out into the community. We are all about teaching people to make their voice heard and how to take their message and get it out into the world.

The communities they serve include Over-The-Rhine, a socio-economically challenged neighborhood in transition where the center is located, as well as serving residents throughout the City of Cincinnati and surrounding suburbs. They service the not-for-profit community by offering very low-cost, yet high-quality professional media production services. Media Bridges plays a role in the Cincinnati region's formal educational systems by offering video production and media literacy courses as inter-session and supplemental instruction within the curriculum. Media Bridges also participates within a community of public access centers across the region and nationally to take action on legislative issues that affect their industry.

Organizational development and planning. Maintaining their operation and continuing to meet their mission is a constant challenge. Tom Bishop talked about the biggest challenges that Media Bridges and all not-for-profits face—funding and capacity.

> Every non-profit generally has more people needing their services than they are able to provide. To meet their mission, and to serve the most people possible they have to make choices about what service to provide and if they have to charge. Some services are provided for free. Some services such as the non-profit media production services are at a very reduced rate so Media Bridges can continue to meet their mission of serving this [not-for-profits] constituency, yet can earn enough to cover the cost.

Aside from the expected challenges of a not-for-profit organization in a difficult economic climate, Media Bridges is currently facing another serious funding issue due to changes in public education and government (PEG) funding legislation. It is an issue with repercussions that reverberate through community media access organizations across the nation. The issue is that historically approximately 87% of their funding had been provided through a cable access franchise contract with Cincinnati as the local municipality supporting Media Bridges through dedicated public, education, and government (PEG) television fees. Through a recent change in the law regarding how the cable companies contract with municipalities, those fees are no longer committed to the municipal public access centers. This funding change has the potential to be devastating to the Media Bridges and other community media centers around the nation. Bishop works state and national media organizations, including the Alliance for Community Media to repeal this law and to develop additional means to keep public media a social and cultural priority.

At the time of this study, in order to continue their operations and move into the future, Media Bridges was engaging in a cycle of strategic planning that could potentially hold great consequence. Tom shared several internal documents they were using to help inform the organization as they worked on their strategic plans for the upcoming years. Recently two studies were conducted for use in their strategic planning including the Greater Cincinnati Survey (Spring, 2010) from The Institute for Policy Research at the University of Cincinnati, and a Needs Assessment Report conducted by the Bloomstrom Marketing Advisors, Inc. (May, 2010). While both research reports were to be used, according to Bishop, the Greater Cincinnati survey was particularly exciting because a similar study had been conducted years ago with many of the same questions asked. With this updated survey they would be able to compare data across the years. They were able to add questions that were relevant based on updates in media technologies.

Questions were asked of people in Hamilton County, specifically of those in Cincinnati who had heard of Media Bridges, and about the specific services with which they were familiar. They were asked their opinions on the importance of community-based production and cable broadcast distribution. Of those living within the City of Cincinnati, 88.2% said that it was somewhat important or very important that education and video production equipment be available for use by the public. The results were disaggregated by a range of demographic characteristics that could prove valuable for Media Bridges as they develop their planning strategy including ethnicity, age, income level, educational attainment, years in the county, and other factors. Very importantly for the organization's future, a survey question was asked of the community's opinion of the level of funding received from the Cincinnati Cable Access contract,

with 91.7% of the respondents expressing that the level of funding should remain the same or be increased.

The Needs Assessment conducted by Bloomstrom Marketing Advisors, Inc. was a key component of Media Bridges' strategic planning. There were five focus groups held with 29 individuals representing educators, public access producers, religious access producers, non-profit organizations, as well as mass communication and media arts academics. One goal, among several of that study, was to identify ways to express Media Bridge's mission of education, equipment, and environment to the community. The objectives were: to identify and rank order audience and user groups' needs from Media Bridges; to uncover unmet community communication access and media arts education needs from these groups; to learn how well the organization is meeting these needs; and, to understand audience and user group perceptions of Media Bridges. In addition to other findings relevant for strategic planning, one explicit need cited by participants was to improve media literacy across the community as not all people have the access to financial resources, transportation, or technological resources to easily access media to express themselves or communicate with others. Another stated need was for Media Bridges to broaden their role as an independent, community media outlet based on their location and mix of offerings. The recommendation from the report was to actively invite and encourage more people from across the region to create messages that express their viewpoints on topical and potentially divisive issues.

All of Media Bridges' choices are based on having the funding and the capacity to meet their mission of providing the equipment, environment, and education and to help people effectively communicate through media. To meet their mission in the studio, the classroom and the community, Media Bridges offered a wide range of programs and services. The next section

presents findings on innovations in technology, and the range of programs offered related to their mission of providing the environment, equipment and education. This is followed by findings on the one program that was observed, the one-week video production camp.

Programs and services. Media Bridges offers multiple services aligned with their mission of providing the equipment, environment, and education to assist people to effectively communicate through media. Findings on the equipment and environment are presented next, followed by the education programs.

Equipment. To provide the equipment to meet their mission, there are challenging decisions regarding methods of innovation adoption. According to the staff, many factors have an impact on decision-making when it comes to planning, selecting, purchasing, utilizing, and even disposing of technological equipment. In the most basic of terms, the equipment consists of video cameras for checkout and those for studio use, audio equipment, editing computers and software, Internet computers, racks full of computer servers used to feed video and audio content to the various stations, the radio studio, the TV production studio (lighting and such), and the radio transmission tower. According to Rob Wilson, Information Technology Specialist and Broadcast Technician, there is equipment in use that ranges in age from the 1980s up to the present day.

Concerns that seem obvious regarding technological advances are budgets, purpose, durability, ease of use, and teaching tools relevant in the current media climate. One of the more peculiar considerations had to do with the City of Cincinnati's purchasing and disposal regulations. Media Bridges utilizes very outdated cameras and will continue to use them until they are completely inoperable—they cannot sell them or even throw them away. The issue, according to Tom Bishop, is that under the City contract, any equipment that is purchased with

city funds must remain as city property unless it is deemed as no longer in service and then it can be sold at auction.

> We have a limitation on us that is kind of a pain. Any of the stuff we buy with city dollars counts as capital equipment, that is $400 or more in individual equipment. The city owns it and we can't sell to get more money. Let's say that I have an $1,000 camera and it is obsolete. My choices are (1) hang onto it until it breaks, (2) turn it over to the city where they will go through their convoluted process and eventually it ends up in an auction. The money does not come back to us it goes into the general fund, or (3) do without. So what we have been doing is that we use pieces of equipment around here until literally flames are bursting from it. We try to buy pieces that will last a long time and that will have broad application.

The transition to High Definition (HD) video cameras is a decision that is based on factors that go beyond cost. Lee Snow, Media Specialist, explained it this way.

> We actually cannot handle HD. Our editing computers are too old to handle that and I am not sure if our video servers [computers with the cable station video programs] can handle it. And I would not be surprised if a lot of our audience used the standard definition TV. Heck, I still have standard definition TV. So we are actually looking at getting more cameras for our producers. So right now, we are still looking at standard definition cameras, not the HD cameras. It is a kind of a struggle, because almost no one is selling standard definition cameras. They are actually a little harder to come by because people want HD cameras. Now that Youtube can handle HD video, the HD cameras are becoming lower in price than the standard definition cameras. We just can't handle HD video with all these factors.

An interesting aspect of technological innovation and community engagement involved Lee's own purchase of a very high end and very technologically advanced video camera. She is a member of an on-line community of media artists who have come up with a *hack* for that camera, it is computer programming that provides unintended technological alterations and adds additional functionality to the lens on this particular model. Lee proudly told me all about it and how she had used the hack to modify her camera and then shared the results with others in her virtual community. Several staff members mentioned Lee's new camera and commented on the quality and capabilities and their intentions to buy one. When I asked one of the them if they intended to hack their camera to increase the functionality, the response was an exuberant "oh yeah!"

Rob Wilson, Media Bridges' Facilities Coordinator and Information Technologist, is very active in the Ohio Opensource software project. He works with his peers in other non-profit organizations and to develop ways to utilize innovative and low-cost technological tools. It is a group of software developers who are committed to providing public access to the computer programming code and who create Opensource software. The software is offered free of charge to the public and created based on communities of programmers working motivated by cooperation and increased status.

Rob also explained an interesting innovation that, while not low-cost at this point, would certainly innovate public access media. It is the concept of virtual editing software. Users could log-on to the Internet and upload their footage. Then that footage could be accessed and edited by anyone who could sign onto the web. Collaborations among a variety of producers could be accommodated, as well as access for the cable station to easily broadcast the piece. The goal would be to create Opensource software that would serve the same functions. According to Rob,

> It has become a new push in the private sector. If I am in California, I log in to your server here or your project and we both see it at the same time. I'm able to edit or I am able to work on that...so that we can edit across the country--or even across town. Our producers can log-in and edit their video right from home and then just submit it right on a file...we would get it and no DVD. If we ever had to shrink, then we didn't have large facility hours, then they could do it [edit] day or night. So it is definitely becoming a trend. This software probably won't be developed Opensource for a long time; since it is really time consuming to develop and programmers have to eat.

In the classroom, Lee would like to teach the producers to use professional grade software for her students so they can get a fuller learning experience. To accomplish this goal, they are investigating a program that would function much like Photoshop. She explained how Opensource software could expand the ability for Media Bridges to provide higher quality media literacy experiences.

> OpenSource software allows us to cut costs and to teach media literacy with less expense. We are looking at Opensource software that is like Photoshop. Right now, we can't afford to buy all the licenses to legally put Photoshop on our computers. We teach Photoshop elements, because it is a much simpler and cheaper version of graphic design. We teach that at least so producers can promote their own television shows. But we want to give them the highest quality media options, so with Opensource software we don't have the license fees and can offer producers a better experience.

Rob reflected that while using Opensource in the classroom is a real option, to have OpenSource software that producers could access from anywhere would be an optimal situation. However, the reality is that the clientele they serve in many cases are without the resources to

access the Internet from home and need to be able to use the physical location of the Media Bridges facilities to realize their production goals. Rob reflected on one of the sociological lessons he learned since coming to work in the community access environment.

> Working for a for-profit, you are not working for people that your clients, you know the people who are paid to do a job. So I used to go out and service people who are paid as employees. We were all on the same level; we are all on the same status. We were all making money, all had benefits, all cushy and all comfortable. There wasn't a lot of adversity or struggle, nobody was hungry, and nobody was starving. Everyone had a smile on his or her face; everyone has a medium to nice car in the parking lot. Then you come here and you are dealing with a whole different clientele. You are dealing with the actual public. People are starving. People don't have good jobs or incomes. They are not what I would have presumed to be my equals when I first started here. But I have learned to respect them as equals, so that is where the most growth for me has come. The most humbling of experience was for me to be able to be a part of this community.

The technological decisions are interwoven with the economic and social challenges faced in the communities where Media Bridges participates. In the next section are the findings that relate to the environment where the programs and services are offered.

Environment. The environment includes the physical space, virtual communities, as well as environment available for the public to create and distribute media. According to Tom Bishop, providing these environments includes being an advocate on behalf of the peoples' right to access public broadcasting resources, an activity taken very seriously at Media Bridges.

Within the physical space, there is the large television production studio, the audio recording studio, Internet computers, editing bays, and a large classroom area. They conduct

many media literacy educational outreach and technical production courses within area schools. And through their services, they create an environment for not-for-profits to access low cost resources.

Media Bridges operates four public cable access channels that serve different programming purposes. There is the Community Access Channel that embodies the voice of the people, and according to the Media Bridge's orientation materials, it is the First Amendment at work right here in the tri-state. There is the Religious Access Channel that serves as a means of expression for all of the faith community. There is also the Educational Channel that features programs for and about the Cincinnati educational community that informs viewers of happenings within the Cincinnati Public School board as well as other programming from around the world designed to educate on various topics. They also have the Metro Access Channel that shows programming from other cable access stations in the Tri-State region.

Last spring Media Bridges launched the low frequency public radio station WVCQ FM. This station is significant in that it provides independent programming as well as local news and information. While the trend in radio is toward on-line streaming media, this media venue serves an approximate three to five mile circumference around the Over-The-Rhine community where Internet access is not ubiquitous and where there is a need for media designed to serve the wellbeing of a diverse public. According to Christa Zielke, it is important that Media Bridges operate the radio station to serve the local community's needs and to create an environment for increased access to the airwaves.

> Culturally and generationally, there are some distinct preferences in the ways that people receive their information in terms of radio broadcasting. You have people 18-35 [years old] who will listen to podcasts; they will listen to Internet streaming. But you have other

groups who will prefer to listen to traditionally to the radio in the car and on the radio. For instance, my mom is 70 years old and she is a very smart woman; she is a retired RN. But she does not listen to the radio on her computer. She listens to it on her boom box that she has on her kitchen table while she is doing the crossword puzzles, reading, hanging out, whatever.

The other reason this is important is because the radio stations that exist right now are primarily consolidation of a few big media entities in radio. Right here in Cincinnati, there are 83% of our radio stations that are owned by out-of-state companies, with 50% of those radio stations owned by only three companies. So that can tell you a little bit about the risk of homogenization and lack of diversity in radio broadcasting.

This station is a low power FM (LPFM) station. LPFM came about with the purpose of providing an ultra-localized identity and a resource for small, primarily rural communities. Cincinnati is only the second major urban market to take on one of these LPFM licenses and utilize them for broadcasting in an urban area like downtown Cincinnati. The reason they did this is to provide a very available resource for a small area to have an identity, to have a voice, to have access to the airwaves. And with low-power FM for a much lower cost, than obviously a full strength commercial station, organizations such as Media Bridges and communities like ours can afford to operate these stations. It is all about providing accessibility.

The web presence Media Bridges maintains (MEDIABRIGES.ORG) is one that has evolved over the years. The current website has a traditional design with information about the organizations' offerings as well as their history and mission. On the front page is current news and events as well as relevant information to larger media issues, such as legislative and political

actions. There are portals for donating, as well as a sign-on that allows for enrollment in classes. They maintain blogs for some of their programs, although the posting were somewhat outdated in as of March 2011. Currently, they do not have a sign-on that allows for social networking, but according to Tom Bishop, they would like to create a members area with resources for producers and different levels of donors. The radio station webpage (WVQC.ORG) has a greater degree of interactivity that allows for more producer and donor engagement.

The environment for effective communication through media takes many forms including actual facilities, distribution streams like the radio and access channels, advocacy undertaken to support the continuation of free speech as a basic right, and the virtual presence that reaches into new communities. Teaching people to exercise their rights through media production at Media Bridges takes also several forms. Next are the findings on the various educational programs, followed by the observation of the weeklong youth production camp.

Education. To meet the educational aspect of their mission, I found Media Bridges offered diverse and far-reaching programs that had the common thread of empowering people to communicate. Producers who come to Media Bridges bring a wide range of experiences and a wide range of skills levels. A key educational goal was to work with each person so they learn to take advantage of the equipment and access. According to Media Specialist Lee Snow,

> The community needs to have the tools of the media, be it Internet or production of video, to be able to match up with everybody else. It keeps it [access to media] on an equal level. Someone who is not versed in media is at a huge disadvantage. If you don't know how to voice your opinion to the masses, at this point, maybe you are the only one

with that idea. How are supposed to gain power or to find that one follower who might help you make your dream into a reality?

The production courses included an entry-level orientation to the organization, production equipment training certification, media literacy and production outreach in schools, radio, and television production, specialized programs to various constituencies, and the type of course that I observed, a youth enrichment camp. Everyone who utilized the Media Bridges facilities and who takes part in the production courses—aside from the youth in the camps—had to go through the entry-level orientation to become a *producer.* They are then able to enroll in any of the courses to become certified on the equipment. The certification included instruction on how to create effective media as well as the practical aspects of using the tools and managing the process.

According to Christian Appleby, (then) Education and Non-profit Services Director, when asked how Media Bridges meets their mission of providing education, he said,

> We do it in a hundred ways--all classes are free; way beyond what most access centers do where they just have a studio and maybe field production. We do have those but our field production classes--I think we go farther in lots of ways--lighting and sound and lots of practical experience with the camera. We teach editing. We give them a strong background by showing documentaries and talking about editing theory as oppose to just teaching what buttons to push...we do tell them the buttons to push...within that context.
>
> It is our mission to teach media literacy. We go through and explain that it is more than you know *The Rule of Thirds*, [where] you break it [the screen] up into a grid and you line up an image to make it more interesting and more effective for them to get their message out. We talk about the production management process in our production

one class so people will understand the stages of production. They don't just go out and not know what they are doing. They know how to plan when they go do their project. The whole first class is pretty much going over production management. Here is your idea, what do you want to achieve with the idea? How have other people done it? Do you like how they did it, or not? What can you do better and then figure out the timing--going to locations ahead of time to figure out what you need. Those are all the things we teach in our classes.

Media Bridges offers a class that Christian designed based on *Project Green Light*, an independent filmmaking competition featured on HBO. According to Christian, this class was very popular with adult producers as well as on the educational outreaches in high schools.

> [It is an] advanced production course with visual story telling. Every class gets the same twenty-six lines of dialogue between two characters, but every class makes a brand new story out of it. They tell a brand new story by how the location is, what kind of characters they are, and what they are doing. It is sort of like it becomes more important what they show rather than what they say to tell the story. You can't change the dialog. But you can change who they are and where they are and what is happening.
>
> The Hughes [High School outreach] one was based off the advanced production [course] where I give the class twenty-six lines of dialog between two characters and then they have to invent a story around the dialog. The first one was of two old guys talking in a barbershop and one of them flirts with a woman who comes in and you find out later that she is a black widow wanted by the police. The second one was following this woman over 8 or 9 weeks and figuring out and coming to terms with the fact that she was pregnant. Some of it was a text message between her and her friend. The third one was a

CIA kind of a thriller suspense kind of a thing. And the last one that we completed was an opera where a woman had singers in and she put the whole thing to music and she used it as an opera.

So the idea is that it is what you show, not what you say that matters when you are telling a story. Each one of them is a brand new story every time. But they are all saying the exact same thing. It makes for a very interesting class.

Christian and Lee teach producers of all ages and skill levels. Lee described an experience with one of her students that illustrated the needs and the connections between community media literacy and technology education.

You have to be able to use it [the equipment] to have media literacy. I recently had an older man, in his 60s or 70s. He had never used a computer before and he was in my Final Cut [editing software] class. He just dove in. The fact that he learned to use the mouse during the class was amazing, even though by no means was I able to pass him. But the first time he starting using a computer at all was on Final Cut. He started getting used to the interface. He had a hard time seeing. He had never used a typewriter before either...so he had no keyboarding, no mousing experience before...he learned it in that class.

That is why you need community media, so that he could come to Media Bridges for free and start to learn to use the computer and start to learn to use video equipment. He was a very smart man and he might have the most revolutionary idea in the world, but if he doesn't know how to voice that idea to someone else who can also voice that idea. He needs both the technological ability and the media literacy to know how to do it, as well as to know how to effectively relate his ideas.

Media Bridges provides several educational outreach programs that supplement the curriculum of schools in the Cincinnati area. These programs are sometimes directed at teaching the students and sometimes are designed as professional development for the teachers. According to Tom Bishop,

> I think educators need a strong background in media these days. At the very least they need to be media literate—that is to understand why the Steven Spielberg's and George Lucases do what they do. But more importantly [to understand] how the P&Gs do the things they do. The students they are teaching—as much as we would like to think that they are getting their education in the classroom, part of it they are getting in the classroom—they are getting more of an education about the world from their televisions and their computers and their phones. If they [students] don't understand how to interpret the messages coming into these various devices, they are going to be victims instead of people who can take charge of the world. We already created an entire society of advertising victims, people who will believe anything because it is on TV--couldn't say that on TV if it was not true right?
>
> Why do teachers need to know about media literacy? This is how we interact in this world. We used to walk down the street and talk to each other and watch a little bit of television. Now kids consume a lot of media--and it is not just through their televisions, it is through their computers, Ipods, telephones. It is not unlike sending your kid out without teaching them to cross the street. If your kid is going to be out and crossing the street, they are going to need to know the rules and how to protect themselves. Teachers having the ability not only to create and to teach students to create

or to have access to people who can teach students to create productions, that is going to be a job skill for teachers.

Lee expressed the importance of the teaching the public to make use of the media as it exists today, as compared to in past eras.

> Things are very different these days with media and ideas. Years ago, someone might want to get their idea heard and they would write an editorial in the newspaper. Maybe the editors would print it, if they liked it or maybe not. Now the supposedly crazy person down the street can get their great idea out, on our channels or on the Internet, because he learned to use video or learned to use radio--media to take his idea to the masses. And see if anybody else says 'I like that idea too.'

The various educational programs and services that Media Bridges offer help producers generate a wide variety of content. Christa Zielke described how the nature of the content stimulates discussion as well as generates new learning. She alludes to what became a consistent theme amongst the staff, the importance of the producers' right to create content of their choosing over all else.

> Sometimes you don't agree with the things that you see people creating and the ideas that they are putting forth but that is part of free speech you know. You get to see some stuff you agree with and you get some stuff you don't and a lot of stuff in-between that makes you think and question and discuss. Content is king.

Media Bridges staff articulated how the organization meets it mission by providing the education, equipment, and environment for people to effectively express themselves through media. In the next section is a presentation of the findings from the one-week long youth camp

that was designed to expose them to video production and to have a good experience making media.

Production in the youth media camp. With the main focus of Media Bridges being on adult producers, the youth programs operate to help children and teenagers get a sense of how making media and understanding media are related. According to Tom Bishop,

> Youth media camps are a delight and an opportunity for young people to learn the hardware and the methods of creation. Also they learn a little of media literacy, not only learning what to create and how to create, but WHY something is done with piece of media. And what are the motivations behind creating media so that they have a better understanding when they go home and watch their television or YouTube.

The camps offered youth the opportunity to learn to produce using video technology, as well as having the opportunity to express their views. It is important for them to have background experiences as well as an understanding of the larger contexts, according to Development Director, Christa Zeilke.

> Young people a lot of times are being born into an already highly advanced technological wave and they are typically very excited and very much on the cusp of these advances. What is great is if you can teach them some of the theory and the background and the uses and the techniques. They can take that enthusiasm for technology and go really far with it. If you teach them how to assess and analyze media messaging, they can then kind of translate it and understand how media is targeting young people and how media messaging works. [They will learn to understand] how ideas are conveyed and sometimes they are persuaded. When they become aware of that they can become very powerful, powerful creators and thinkers and producers. The creativity and imagination

that young people have; there is really no limits to what we have seen them produce. They come out with ideas that I have would never thought of in a million years. And when you take that imagination, that creativity, and that enthusiasm for technology, and give it a home where it can grow, and flourish and be nurtured... and honed. Amazing things happen. It is mind blowing.

According to Lee Snow, Media Specialist and Instructor, while the bulk of the producers at Media Bridges are adults, the summer camps are a significant way that youth can have experiences that they might not have otherwise in their own schools.

Media Bridges for the most part, focuses on adult and once in a while we get the occasional teenager. In the Cincinnati public school system, there is a lack of media education. So with the summer camps, the kids can come in and they can try it, even if they don't quite get all the concepts. They've created a video and are at a little bit more of an advantage than their classmates that have never created a video. So if they get to high school and their newspaper decides to go on-line only, and I could see that happening at a high school, and they need someone to shoot with the only camera the school can afford. That kid can raise their hand and say "Well, I used the camera at Media Bridges a couple years ago." Before you know it, that kid is going to NYU film school and they are the next Stephen Speilberg or James Cameron.

When this study was conducted in the summer of 2010, there were several camps for youth of various age ranges. Within the summer production camp offerings, I chose to observe a weeklong video production camp for eight- to twelve-year-olds that took place during the week of August 9-13. There were six students who signed up on-line through the Media Bridges website. Four children were girls and two were boys. Two of the girls were sisters. Another girl

was there with her brother, both of whom had been in two previous Media Bridges' summer video camps. One boy, who was from Russia, lived with his parents in the Over-The-Rhine neighborhood. The rest of the children lived in the surrounding suburbs.

The goals of the camp, according to Lee Snow who was the instructor, were to expose the youth to production experiences, teach them a bit about the process and technologies, and give them an opportunity to have a good time. The objectives were for the students to write, produce, shoot, star in, and edit a short video piece in one week. The production jobs were to be rotated based on who was acting in the scene, with all the children having an opportunity to do each of the jobs. Table 5 breaks down the daily activities that took place within each of the five two-hour sessions.

Table 5: Daily activities of Video Production Camp

Monday	Orient participants to the program Brainstorm story ideas, set the story, and begin writing the script Homework: youth were to bring in props and costumes from home
Tuesday	Solidify the storyline, write the script, costumes and make-up Beginning shooting scenes
Wednesday	Majority of shooting takes place, Green screen special effects
Thursday	Shoot, Voiceover recording, Editing
Friday	Screening, pizza party, focus group

Table 5.

Day one. On the first day of the camp, Lee began by explaining how the camp would progress. Then she led a brainstorming session where the students began generating ideas for the style and content of the. The group chose to write a piece what would be a parody of fairy tales. The children shouted out fairy tale ideas that Lee listed on the board. Several ideas were offered

up and included some Disney tales. Lee discussed the origins of the stories written by The Brothers Grim and Hans Christian Anderson, and discussed how the life stories of Anastasia and Pocahontas had been modified by Disney into animated tales.

During the selection process, Lee had them select the themes that were most *do-able* rather than selecting what they liked the best. She had them think about how the ideas could be combined into one story. The group was to think about the props and costumes they had at home that might be useful for the production.

Once the group agreed the film was to be a parody of fairy tales and had brainstormed several ideas, Lee then lead the group in the consensus building technique that allowed each student to have a voice in the decision making process. The process, called the Delphi Technique, is where everyone in the group is able to vote on their top three options. After the first pass through, the options that receive some votes remain and the ones that did not are removed. Then there is a second vote on the remainder of the items, again selecting the top three options. The option with the largest votes is selected. This is a common consensus building technique used in research, business, and community development. The group reached consensus to develop a story that combined Anastasia, The Princess and the Frog, and The Three Little Pigs. The children then brainstormed ways to combine the three stories into one.

In the second hour, the students worked with Lee to write the script and develop it into a series of scenes. Lee led the discussion as they identified a plot, rising action, and resolution. They formulated scenes and combined them to build the story. The students developed the motivation and dialogue of some of the characters through their brainstorming. The students negotiate their roles. The Delphi process was not used at this point. The boy with the wolf costume was cast as the wolf. For the other parts there was a bit of heated discussion and a

round of *rock, paper, scissors.* Lee intervened with a coin toss. Once the roles were set, they sat down to write their lines based on the characters and to plan their costumes. The story they had constructed was roughly developed and they needed to work it out in more detail.

They worked through how to parody the Disney Anastasia story and integrate it into their combination of the fairy tales. They were unaware of the real history of Anastasia, so Lee gave them a sanitized version of the tragic end of the Tsarina's life during the beginning of the last century, without getting too graphic or descriptive. They included a brief and convoluted reference to Anastasia's history and incorporated her background story into the script. This is the story that the students devised.

> Princess Rosalina Gomez is hanging out at her penthouse. The frog is there on the porch and desperately begged for water. She squirts him with the hose. Then realizing he just might be her prince, she begins kissing him repeatedly. He doesn't turn into the prince, so she takes him to her friend, Princess Anastasia, to find out why.
>
> Anastasia kisses the frog to test it and he then turns into the Frog Prince Amphibio who then starts making advances on her. Princess Rosalina becomes upset and storms off. Amphibo wants to get to know Anastasia. She provides an elaborate, although not historically accurate, explanation of what happened to her family including how her parents tragically passed away. She then explains (through a flashback) how she came to become a princess after being involved in an impossible love affair with her servant. Her grandmother ran him off and Anastasia was crushed and fled from her rural home to live in the big city.

Figure 3. Students reaching consensus on story ideas using Delphi Technique to construct their script.

Cut to Rosalina back in the penthouse where she is holding an invitation to Anastasia and Amphibio's wedding. *"That prince was mine!"* The Hip-Hop Wolf jumps out of nowhere and asks Rosalina if she wants help to get her prince back—he could help but it was going to cost her. The Wolf asks her if she knows where to find the two pigs. Rosalina says she will tell him, but he has to deliver first. Cut to the Wolf catching Amphibio on the street and covering him with hand sanitizer to turn him back into a frog. The Wolf has a note from Anastasia about where the pigs' house is located.

Anastasia, Rosalina, and the two pigs are in Pig Eva's house. The frog jumps in the window. Anastasia kisses him and he turns back into the prince. Princesses Rosalita Gomez and Anastasia begin fighting with each proclaiming it is *her* prince. Amphibio confesses to actually being in love with Pig Eva. Mayhem ensues. They all escape before the Wolf blows up the house, realizing that the Narrator had set them all up. They then seek revenge on the Narrator, chasing him around yelling '*get him!'*

After two hours and a lot of thinking, talking, and negotiating, the first day of camp ends with the students instructed to go home and find props and costumes that will be useful during the shoot.

Day two. The day began with the group putting the themes together and completing the scriptwriting. Lee printed out the scripts and the group held a read-through and the first rehearsal. Afterward, they developed costumes and props and helped each other get made up for the first shots. This was the first hour of the day.

For the second hour, the cast and crew moved to the first location, the rooftop patio. Lee brought out the audio and video equipment and showed them how to hold the microphone and to aim and shoot the video camera. Lee positioned the actors to go through the scene. She had them

run through their lines and prepare to shoot. Alanna (aka Princess Anastasia) was operating the camera and directed Princess Rosalina to move closer to the frog, so that the shot would be framed better.

Lee realized that she needed to operate the water hose so that Princess Rosalina Gomez could squirt the frog. Lee went on the outside of the porch rail to set it up. Since she had to move away from the action on the other side of the railing, she asked me to direct. It is at that point that my passive observation morphed into participatory observation. I took on the role of production assistant to help her direct that shot and supported the work of the cast and crew. After the first scene was complete, the group moved inside to shoot an interior shot of Anastasia's apartment. These shots took the remainder of the second day.

Day three. Production began with a scene of the Wolf and Rosalina making their deal on the rooftop patio of Rosalina penthouse. It should be noted there were significant challenges that the crew faced with the actors that morning. The temperature on the rooftop garden was well into upper 90s, causing concern about the wolf's wellbeing. The two sisters had been to a Jonas Brothers concert the night before and had not eaten breakfast before coming to camp, so they were tired and hungry. One of the two girls, the actress playing Princess Rosalina, was reluctant to do her lines and was causing a royal stink. It took a bit of time to engage her in a positive manner; during that time the wolf was getting seriously overheated. After awhile the problems were resolved and shooting commenced. Following the one exterior scene, the rest of the shots were indoors using *green screen,* a technique where the background is one solid color that can be easily removed and replaced with images and special effects in postproduction. A major technological difficulty was discovered the next day, as the above-mentioned princess failed to turn the camera on during several crucial scenes—these scenes were not caught on camera.

Figure 4. Instructor teaching students to use the video production equipment.

Figure 5. Students exploring how to use the camera and audio equipment.

Figure 6. Shooting commences.

Figure 7. Crew working to complete shots of exterior scene.

Figure 8. Instructor directs actors during the green screen special effects sequences.

Day four. On the final day of shooting, there was one scene shot on the street in front of the Media Bridges building. The children operated the camera and learned about the challenges of capturing sound with consideration of the street noises and passing traffic. During that scene, they also learned about a special effect that was used to transform the Prince Amphibio back into a frog. After completing the street scene, the group went into the audio studio to record the voices of the wolf and the frog that would be edited into the final piece. The entire cast read through the script, and had the opportunity to take part in the recording session.

In the second hour, the children searched the web to select the images and music. Lee led the children to websites where they accessed music and images that were not copyright protected and were legally available. This was Creative Commons (CREATIVECOMMONS.ORG) and contained images and music for such purposes. She explained a bit about making choices of materials to download and how to be respectful of artists' work. The students then worked in pairs to learn about editing software by constructing their own pieces from the footage that was shot. See Figure 9.

It should be noted that each day after the children left, Lee supplemented the work that had taken place during the sessions, and prepared for the next day. For instance, between the conclusion of the shooting day and the editing day, she loaded several computers with materials so that the students could work on their own versions of the piece. While she was editing with the group, she asked their opinions and had them offer suggestions, however she maintained the master version of the piece so that it could be completed in a timely manner.

Figure 9. Instructor facilitating students' exploration on video editing software.

Day five. On Friday, the children had another opportunity to work with the editing software while I conducted short interviews with each one individually. They were asked about their experiences during the camp as well as about their in-school video production opportunities. The children, with the exception of the one boy who lived in Over-the-Rhine, were all from suburban schools. The one boy who lived in the area attended the Cincinnati Public School for the Creative and Performing Arts. The students all said that they did not have opportunities at school to make video, and that they all enjoyed the camp very much. The parents were invited to come in for a screening of the project and to have pizza, and the focus group held. See Figure 10. Due to the celebratory atmosphere, the focus group was more along the lines of a group discussion that flowed without formal structure. At the conclusion of the event, Lee gave each child a DVD with the finished video.

In viewing the final piece made during the camp, there were a few holes in the plot due to technical difficulties (the camera turned off during some of the green screen shots). Even though the story was a bit convoluted and the content was a little thin in spots, during the focus group the children expressed that they were pleased with the camp and happy that they had made the video. The two indicators of having enjoyed themselves and having produced a finished piece deemed the camp a success.

Figure 10. Students indicating opinion on the success of the camp during focus group.

On the micro level, the camp was illustrative of the methods that Media Bridges used to expose youth to the concepts of technological, media, and critical literacy. On the macro level, the culture of the organization is such that the instruction and curriculum are designed to bring the themes into every aspect of their operation. Next findings are presented from the piloting of the protocol using the KSAVE indicators of technological, media, and critical literacy.

Summary of Findings

In the piloting of this study, data was gathered from several sources including public information, internal reports, interviews with staff and participants, and observations. Studies from external sources offered rich quantitative and qualitative findings that able to be used for comparisons with other CTCs. The administrative and instructional staff offered rich perspective on the ways that Media Bridges had the capacity to provide experiences to gain technological literacy, media literacy, and critical literacy to a community that exists in the urban core, in the region, nationally, and on a virtual level. The common themes that emerged throughout the interviews were the values of preserving free speech to all members of society, and the need to serve, teach, and provide equipment and access for those who are without resources. The challenges the organization faced in the economic and political climate had the potential to have an impact on their capacity for the future. While they intended to continue to meet their mission of providing the education, equipment, and environment to help people communicate effectively through media, they are not exactly sure how that will take place. They participate in and serve multiple communities to create the environment for people to effectively communicate through media.

The programs offered by Media Bridges were designed explicitly for the development of technological, media, and critical literacy. The curriculum of the programs trained producers in

usage of the equipment and includes media literacy as a core component. Media literacy consisted of the aesthetic skills as well as the techniques for effective communication of the intended messages. One key aspect was the ability to discern the nature of the audience, the intended message, and the purpose of the piece. Critical thinking was necessary to create successful media, as was described by Media Bridge's staff.

Table 6: Findings Based on KSAVE Indicators

KSAVE Dimensions	Multiple Literacies	Levels within CTC		
Ways of thinking		**Organization**	**Programs**	**Production**
Creativity /Innovation	*ICT/Info*	• Social entrepreneurialism with production services for other not-for-profits	• Film Outside the Lines • 15 lines of dialogue	• Participant-generated stories
Critical Thinking	*Media*	• Content creation is the purpose of existence • Voice of public is priority	• Inclusive designs to all programs • Visual thinking	• How and why of shots • Content is always generated by participants
Meta cognition	*Critical & Meta*	• Strategic planning and pro-active management	• Producers knowledgeable about entire process and purpose	• Understanding historical context of story subjects
Ways of working		**Organization**	**Programs**	**Production**
Communication	*ICT/Info*	• Active in computing and technology communities	• Use of PEG access stations • Low power radio station	• Produce a piece, screening, and airing
Collaboration	*Media*	• Alliance for Community media and other affiliations with similar CTCs	• Outreach to schools • Sharing resources with other non-profits	• Delphi process for consensus
	Critical	• Legislative activism	• Open access to all voices	• What can we do versus what do we like to do
Tools for working		**Organization**	**Programs**	**Production**
Info literacy	*ICT/Info*	• Staff trainings and tech innovations	• Education in production	• Creative commons music and images
ICT literacy	*Media*	• Servers for programming; staff support	• Producers certified	• Youth in each production job
Active Citizenship	*Critical*	• Legislative information on website	• Access through cable for all voices	• Recruitment on web; free access
Living in the world		**Organization**	**Programs**	**Production**
Citizenship-local and global	*ICT/Info*	• IT coordinator active in OpenSource community • Director active in local, regional and national communities	• Mission of social justice • Inclusive designs	• Experiences provided that do not exist in schools • Accessible and free
Life and career	*Media*	• Staff development on FCC regulations • Alliances with other organizations	• Production skills and literacies • Opportunities for underserved and marginalized populations	• Skills training • Experience in understanding contexts and content
Personal & social responsibility; Cultural & social awareness	*Critical*	• Culture, consciousness and commitment to social justice, free speech, and access equity	• Voices to the community • Freedom of expression • Inclusion of perspectives	• Respect for copyrights • Understanding of nature of historical figures • Sensitivity to inclusion of all in production process

Table 6.

In this chapter were the findings from Phases One and Two. Phase One findings focused on the development of the protocol with indicators of multiple literacy and two instruments. Phase Two findings presented were about the piloting of the protocol including the site selection process and an ecological profile of Media Bridges. Challenges to the study were identified including ways of managing the volume of data generated by the instruments and the social and cultural aspect of multiple literacy learning discovered during the site visit. In the following chapter is discussion on new learning from the development of the protocol, the outcomes of the case study, implications of this research, and avenues for further investigation.

Chapter Five – Discussion

In educational research on participatory culture and multiple literacy learning, there is a need for greater understanding of the contexts that foster rich learning experiences, as well as need to increase access equity for all people to benefit from the existence of these contexts (Itō, et al., 2009; Jenkins, 2010; Palfrey & Gasser, 2008). The purpose of this study was to identify characteristics of participatory culture and multiple literacy learning within a community informatics context. Community technology centers can be complex organizations, each with unique characteristics as well as fundamental commonalities. There are many perspectives that could be taken on how multiple forms of literacy learning take place within a CTC. This study was an attempt to move beyond a single case phenomenological approach to create a protocol that would be effective both objectively and subjectively to identify the unique aspects of a media arts center, as well identifying the common aspects that might be found in any community technology center providing similar services. The challenge was to develop a means of creating a profile to determine if and how multiple literacy learning was taking place within one CTC. The protocol was piloted using an ecological approach to constructing a profile of Media Bridge Cincinnati, Inc.. The potential now exists to explore a range of perspectives using the rich qualitative results from the Media Bridges case, as well as gathering information from across the organization that would as basis for future comparison with other CTCs.

Chapter five is a discussion of the effectiveness of this protocol in identifying multiple literacy learning experiences within one community media center. Discussion about piloting the protocol includes the importance of site selection, a critique of the findings, and concrete ways of benefitting the agency through this research. Implications of the study are discussed in relation to the social, cultural, and access equity aspects of human learning. Methodological implications

are discussed as related to program evaluation. Educational policy and media access policy implications are discussed as a means of social justice attainment. The chapter concludes with contemplate on potential avenues for future research including the pragmatism of data management, applications for organizational development, pedagogy of lifelong learning, and systems thinking for designing inclusive multiple literacy learning environments that celebrate a participatory learning culture.

Effectiveness of the Protocol.

In evaluating the success of the protocol, I focused on the objectives that I originally set out to accomplish in this study. The overall objective was to develop and pilot a protocol that to be used to for identifying characteristics that fostered multiple literacy learning experiences within a CTC. The Phase One objectives were to create a protocol that included indicators of multiple literacies, a site selection matrix, and a data collection instrument. In Phase Two, the objectives were to pilot the protocol including selection of an appropriate site, and conducting the site visit. The two primary outcomes of the study were the piloted protocol to identify characteristics within one CTC where multiple literacy learning was taking place; and, to gather evidence to determine if and how one CTC provided multiple literacy experiences through the production of digital media. The secondary outcome was an ecological profile of the CTC that would serve as the first case study for future comparison.

In regard to meeting the stated objectives, the study was a success. The protocol was developed and piloted at a CTC to identify characteristics that foster multiple literacy learning. In Phase One, the multiple literacy learning indicators were developed, the selection matrix was designed, and the data collection guide was created. In Phase Two, the selection matrix was used to evaluate potential sites and to choose Media Bridges, Cincinnati, Inc., as a CTC with the

likelihood of providing multiple literacy learning. During the site visit, the data collection guide was used to gather public data and internal documents, interview staff, and observe a weeklong video production camp. Analysis of the findings indicated that multiple literacy learning was taking place at the organizational level, the program level, and at the production level within Media Bridges. What were the lessons learned through the design and piloting of this protocol? What adjustments could be made? How might this protocol work in another context?

CTC Selection Matrix. Prior experience conducting outreach in a community media setting informed my need to prioritize pragmatic and theoretical factors to determine if the CTC potentially provided multiple literacy learning experiences (Arndt & Davis, 2009). This motivated me to include a means of pre-screening the organizations based on a range of concrete factors. This resulted in the selection matrix to organize and prioritize consistent factors across organizations. The primary criteria were: (1) that the site was a community media arts center, and (2) that they provided youth enrichment courses. The secondary criteria were pragmatic concerns such as distance, length of camps, access, and community involvement. The theoretical concerns were the nature of the business model and organizational structure, mission match, program design, and instructional methods. The demographic concerns were the nature of the community challenges, age of participants, and population density.

After using the matrix in the pilot, I found some modifications to be implemented for future studies. First, it makes sense to condense some of the criteria that turned out to be redundant. Duration on site and length of program could be combined, as could business model and organizational structure. The organization might provide cable access only, or provide a range educational programs, or perhaps offers production space, or have a host of other services.

Through this study, that distinction came to light and the selection matrix needs to be revised to make clear where the CTC's actions are genuinely focused.

Data Collection Guide. In designing the data collection guide, there were many decisions to be made about what information to include and how to organize it. The data collection guide was designed based on the holistic aspects of the ecological model that warranted investigation into the organization, program, and production characteristics. With the purpose of the study to identify multiple literacy learning experiences, it became evident early on that there was a relationship between the organizational circumstances, the program designs, and the nature of production experiences. For example, the financial challenges and strategic planning issues have some impact on the range of programs offered. There may be other systemic limitations that are not evident and that may inhibit the ability for various populations to take part in specific programs.

The original intention was to gather specific information about the one program being observed during the visit, then to use that information to guide the observation. It became apparent that the one program being observed might be illustrative of multiple literacy learning or it might not. There maybe technological, media, or critical literacy learning taking place in other programs, not only in the one program being observed. It made sense to expand the program section of the instrument to investigate the various kinds of programs and services offered throughout the organization for indications of multiple forms of literacy.

A related decision was whether to define the camp experience as instruction or production or to combination the two functions. There are many other aspects of production aside from the direct instruction, such as creativity and experimentation that it made sense to broaden the term from instruction to production. The program being observed in this study was

a basic videography production camp that assumed the participants did not have pre-existing knowledge. Other programs will have different activities and experiences that should be included in the protocol as they could indicate multiple forms of literacy learning.

A key lesson learned through the development and piloting of this protocol was that as a researcher, I intended to observe the camp and watch how the production and instruction took place. The day the camp began, my role quickly changing from being an observer to one of participatory observation. I didn't anticipate this happening and while I certainly had a choice if I wanted to make this shift, in the moment the choice I made was to jump in and assist with the production process. There were six children and one instructor/video director who, although she was extremely competent, obviously could have used a hand. This epistemic shift from observer to participatory observer made sense given the circumstances as well as the not-for-profit culture. The social expectation is that when assistance is needed, you jump in and help. Through this participatory experience I learned at a greater depth about the program, the instructor, and the participants. Being in those moments brought the ethnographic elements of being part of the community that was being studied, rather than an external evaluator.

How would this protocol have worked in another context and how might it work in future studies? The motivation for creating this study came from a desire to move beyond the one case approach of studying media arts organizations to the goal of to have meaningful data to compare complex learning environments in multiple ways. This was achieved by creating a protocol that was be piloted and can be modified and applied in another context using the first case as a means of comparison.

An important aspect of the design of this study was that it would not be susceptible to destruction by unforeseen forces and unanticipated obstacles. I fashioned the protocol in a way

that would generate many quality sites to select. No matter where the protocol was applied, the study would generate satisfactory results, as long as the CTC was chosen using the selection matrix. There would be the likelihood that some forms of multiple literacy learning were taking place. However, there was no way to tell what those results would be. Next is a discussion of the pilot case of Media Bridges, a critique of the findings, and concrete ways of benefitting the agency through this research.

Pilot Case: Media Bridges Cincinnati, Inc.

Piloting the protocol included gathering information on several organizations and choosing a CTC with the potential for fostering multiple literacy learning. Once the site was selected, then using the data collection guide at the Media Bridges. As I was going through the process of gathering data to find an organization, access to a potential site was offered. I continued with the assessment of the other sites in order to build a solid basis of comparison. To execute the protocol properly, I was committed to compiling organizational information on several agencies and using the criteria in the selection matrix. It was through a conversation with Executive Director Tom Bishop that I learned Media Bridges was very receptive and interested in participating in the study as a way to augment their strategic planning and self-study activities. After analysis of all the potential sites, Media Bridges still was the overwhelmingly favorable choice based on the nature of the organization, types of programs, and forms of digital arts production.

As I began the research on Media Bridges, it quickly became clear that this was an exceptional organization with regard to my subject matter. It was also one in great flux and in the midst of great challenges. My original intention was to create a comprehensive organizational profile that identified how technological, media, and critical literacy learning

experiences took place at Media Bridges. As I researched, I began to see many examples throughout the organization and quickly realized this was a rich and complex environment. As a result my perspective shifted from building a comprehensive and exhaustive profile to one of creating a detailed and rich snapshot comprised of a fleeting moment in time before this organization strategically shifted to accommodate the challenges they faced.

On the organizational level, the larger social, cultural, political, and economic communities that Media Bridges operates in has a great deal to do with the likelihood that multiple literacy learning will take place. The leadership capacity of the organization has a major impact on decisions made regarding the types of programs and services offered and the communities served. The current Executive Director at Media Bridges is committed to the community, has a vision for pro-active development to meet organizational challenges, and is active in media causes on a national scale; another individual in the same leadership role may not be as be as active or have the capacity or inclination to effect change.

Through the piloting of this protocol a great deal of data was gathered, both quantitative and qualitative that clearly point to specific concrete indicators throughout the organization of how technological literacy, media literacy, and critical literacy were taking place. There were also subjective indications of their passion, commitment, vision for digital equity, and social justice values.

The organization, their programming, and the production experience embodied the traits needed for a culture that values social justice, digital equity, and inclusion. The staff was articulate and focused and able to express the relationship between their organization and the functions of multiple literacy learning in a community media center, and the important mission of serving social justice through public access to media. They demonstrated through both their

words and their deeds that there are social and cultural characteristics in their organization that foster rich learning experiences. These themes were expressed as they told me stories of the ways they worked to meet their mission and stories of the people in the communities they serve. During the study, themes arose repeatedly about protecting free speech rights and providing access for everyone, especially for people without resources. As one staffer put it, we straddle the lines between an arts organization, a community media organization, and a social service agency.

My experience working with Jarrod Arencibia, the videographer, was an applied example of the social and cultural value of Media Bridges. It is because they have an inclusive video production program that allowed for Jarrod to cultivate his skills and to be available for hire as videographer for this study. In my former career as a producer, I hired many camera people to shoot various projects. In my opinion, to do a good job, it is necessary for the footage to be of high quality and to have aesthetic appeal. It is necessary for the cameraperson to be there on time and ready to work, as well as to be able to handle all the technological issues associated with the tasks. It is necessary for that person to take direction, get the shots, let you know when it won't work, and to offer suggestions. Jarrod did everything that anyone could want or expect from a cameraperson and he did it well. I was thrilled to have him work with me and he was thrilled to have had the experience of being a professional videographer. According to several staff members, Jarrod embodies the reasons why Media Bridges exists.

There is a major distinction between teaching *why* a shot is composed the way it is, and teaching *how* it is composed. This is the essence of inclusion of critical literacy along with technological literacy within a production course. The pace of the one-week video production camp was at breakneck speed with 10 contact hours to produce a short film with children. The

learning objectives were exposed the children to the process, facilitate production of a piece, and help them have an enjoyable time making media. While the program was not designed to create social change or provide an in-depth education on media literacy, there were occasions when crucial media and critical literacy topics were addressed in ways accessible for the students' developmental levels. During the camp, there was discussion about the life stories of historical figures being transformed and how the students would then appropriate these figures into their own story. They learned about seeking out images and songs that were legal, and not infringe on the copyrights of artists. Although these were understated experiences, they represented the social and cultural values espoused by a media arts organization providing education in multiple forms of literacy through production. These were the cultural cues that promote critical ways of thinking, ways of working, tools for working, and living in the world.

I consider it fortunate to have Media Bridges as the pilot case for this protocol for a number of reasons. There were many indications to demonstrate characteristics that provide multiple literacy learning. In my opinion, it is much more powerful to have examples of opportunities that exist for learning technological, media, and critical literacy through video production than examples where it is lacking. Media Bridges undoubtedly fostered opportunities for multiple literacy learning experiences. How they achieved this included utilizing tangible means such as innovative program designs, action-oriented production courses, social entrepreneurialism, as well as the small- and large-scale actions to protect the rights of free speech for all in our society. They also have the intangible cultural and social justice values that are necessary in this field.

Since the site visit in August 2010, there have been some changes at Media Bridges, as well a great deal of preparation for addressing the outcome of lingering uncertainty. I recently

visited them to get an update. Based on the outcomes of the strategic planning process, they are launching *Media Bridges 2.0*; a rebranding program to expand the public's awareness of what Media Bridges has to offer for education, equipment, and non-profit services. They are keeping their focus on supporting free speech, access equity, the creation of quality content, and distribution through public means. They are expanding their vision to include a broader means of reaching these goals such as exploring ways to provide producers with the knowledge and skills to create excellent media using hand-held devices such as flip cameras and to distribute work through means such as YouTube-type and other Internet avenues. They are also expanding their educational and social entrepreneurial offerings to include professional-level technology and software certification courses designed to meet workplace-training needs including A+ Microsoft certification and Drupal Open Source operating system training.

There were some staffing changes in recent months. Education and Non-Profit Services Director Christian Appleby has moved on to a new position with the local Public Broadcasting Affiliate, and a new employee has been hired to replace him. Also, a web developer was hired who can contribute to Media Bridge's expansion of technological educational offering. Jarrod Arencibia has been added to the staff as a videographer and editor, and according to his co-workers, he is thrilled.

Media Bridges still does not know if the City of Cincinnati contract providing 80% of their funding will be renewed. The tactic they are taking is that there will either be none of the previous funding, some of the funding, or all the funding they have received in the past. Tom Bishop, according to Development Director Christa Zielke, has developed plans that will accommodate how Media Bridges will move forward regardless of the outcome of the renewal of city contract. According to Zielke, they are retooling for potential methodological shifts in their

operation that will allow for them to retain their core functions while working to generate additional revenue streams. While the future is not clearly defined regarding how they will proceed, they are mindfully exploring several options to ensure they will be able to continue to meet their mission.

The staff of Media Bridges expressed concrete ways for this research would contribute to their wellbeing. To be of immediate assistance, they requested a four-page condensed version of this study to use as a policy piece to present to the Cincinnati City Counsel, who is in the process of making funding decisions. In addition, the Community Access Preservation Act was introduced in the US Congress in May 2011 with language that would protect funding streams for public education and government (PEG) access channels such as those run by Media Bridges. A policy piece would be beneficial in supporting that legislation. Tom Bishop is eager to share the research with other members of the Alliance for Community Media. Christa, the Development Director, would like to create publicity pieces based on the research that tell the story of how Media Bridges provides multiple forms of literacy learning through community media arts education.

Implications

Implications of the study are discussed in relation to the cultural, social, and access equity aspects of human learning research. Methodological implications are discussed as related to program evaluation. Educational and media access policy implications are discussed as a means of social justice attainment.

The implications for participatory learning culture are that this protocol can be implemented to develop consistent case studies that capture the modified KSAVE indicators of multiple forms of literacy learning—specifically technological, media, and critical literacy. In

order to renovate existing educational systems and to produce new environments and experiences that incorporate multiple literacy learning, it is valuable to utilize take an ecological perspective on the learning context.

From a socio-cultural perspective, many people do not have access to formal education situations and are in need of lifelong learning opportunities. The renovation, enrichment, expansion, or creation of community media technology centers has the potential to address workforce development challenges to meet those needs. Media Bridges specifically is a pro-active and progressive organization that uses inclusion and development of diverse populations as a key strength in building a capable, qualified workforce. They are constantly building opportunities for under resourced populations to gain technological skills and to access the public discourse to contribute expression of diverse perspectives.

It is important to acknowledge, cultivate, and support existing organizations that are already providing these experiences and empower them to move into greater educational and cultural provider roles. Identifying organizations that have this ability adds to our understanding of the contributions of CTCs to building valuable alternative contexts for human learning outside of traditional educational systems. Through this identification, these organizations can share best practices and support other organization with similar missions.

From a methodological perspective, this study contributed in a number of ways. As an evaluation protocol, it is valuable to use as a pragmatic, pluralistic methodology that recognizes multiple perspectives in complex environments. Single case completely qualitative studies while they are rich with data on unique aspects of a situation, they are difficult to compare. It is through the development of consistently designed case studies that characteristics of participatory learning environments can be identified and cultivated and perhaps eventually

replicated. In some aspects of an ecological context, it is appropriate to espouse an externally generated, objective assessment of the situation based on indisputable evidence. In that same ecological frame, there are aspects that are only knowable through the perception and the internal processing of the one experiencing that particular moment. Through the combined understanding of these perspectives, there is potential to capture a more complete picture of the research site. This research builds the foundation for a collections of consistent cases with learning environments that possess the characteristics of participatory culture; that have scaffolded experiences to explore technology and media; and that are designed to facilitate and guide novice media artists to understand the larger contexts in which they operate.

The implications for capacity building among community technology centers is that after this process is complete, the organization has access to a great deal of data and analysis that they are able to use to support their publicity, policy, development, and planning need. They are able to support their views backed up with empirical research that includes the richness of qualitative data as well as the objectively measureable and easily comparable characteristics of quantitative data.

From a policy perspective, the implications are to use this protocol as a way to identify community-based educational experiences that are providing tangible, measurable means of developing literacies in technology, media, and critical thinking. In addition, the implications for media policy is the potential for this research to serve as means of identifying, effective and systematic ways that organizations are working concretely to maintain the rights of free speech in the public discourse. To build a strong case that is influential in policy development requires data that is timely, meaningful, relevant, influential, consistent, and has the richness of

humanistic impact, as well as scalability that shows how large populations can be positively influenced in an efficient way.

Future Research.

The piloting of this protocol has been deemed successful and Media Bridges provided a solid foundation case for future comparisons. Now there are multiple directions this research could potentially go. In contemplation on potential avenues for future study, my vision includes the pragmatism of data management, applications for organizational development, pedagogy for lifelong learning, and systems thinking for designing multiple literacy learning environments that celebrate a participatory learning culture. Additionally there are methodological modifications that could be implemented for enriching the value to CTCs who take part in this kind of research.

Using this protocol generated great volumes of data on the existence of characteristics that foster multiple literacy learning experiences at Media Bridges. It is enough data to be culled for a long time and analyzed using different perspectives and for various purposes. As I started this study, it became immediately apparent that managing the data would be an issue. How was it best to organize the data, as well as to be able to retrieve it, and to achieve the ultimate long-term goal of being able to compare sites and scale up the findings? For this study, I resorted to the most simplistic manner to keep it organized and ready for the next logical step. From a pragmatic perspective, the next step is to work on the development of a database that would allow for comparison of cases easily and would accommodate the presentation of materials on-line and in video formats. Potentially it would be great to have participating CTCs enter some of their own data or have it import from other sources. With a database designed specifically for this purpose, it would only be a step away from developing organizational e-portfolios that could be used as a means of studying their effectiveness at providing various forms of literacy. As an

on-line database, this could serve as an organizational resource, as well as for marketing the social entrepreneurial services offered by the CTCs.

Future study on this protocol design might include use in an action-research based self-study using an Appreciative Inquiry component as a strategic planning tool for the organization being studied. Appreciative Inquiry is the process of asking questions based on what *is* working and building strategies from that orientation. The goal would be to work more in-depth with the staff on specific objectives that incorporate means of expanding fostering multiple literacy learning opportunities. From a media literacy perspective, it would be interesting to have the media arts organization produce a documentary as a means of a self-study exercise as they go through the process. This would be a media piece accompanying the case study data to build a collection of evidence where multiple literacy learning is taking place. It could be shared on a public website to demonstrates environments with great examples of providing multiple literacy learning.

Educational contexts are changing with the paradigm shift to a participatory learning culture. Multiple forms of literacy are needed to succeed in the educational systems and in the 21st century workplace. Community media centers are complex organizations that provide valuable opportunities for the public to create, distribute, and store evidence of cultural and artistic expression through digital media arts. These organizations provide much-needed opportunities for all people to access technological resources and to grow both personally and professionally. Through the development and piloting of an evaluation protocol, this study captured an ecological perspective to learn how Media Bridge Cincinnati, Inc. provided multiple forms of literacy learning. This foundational case will serve as the basis for future comparison with the goal of developing more and more innovative contexts that support multiple literacy learning.

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Appendix A – Protocol Instruments

CTC Selection Criteria Matrix

Considerations	Criteria	Scales
Primary		
1) Organizational structure	Community media arts center	❑ yes ❑ no
2) Enrichment programs	Youth digital media arts	❑ yes ❑ no
Secondary		
Pragmatic		
Geographic location	Travel distance	❑ < 50 miles ❑ 50-99 miles ❑ 100-250 ❑ >250
Scheduling	Duration on site	❑ 1 week ❑ 2-3 weeks ❑ 4-6 weeks ❑ > 6 weeks
Access to site	Receptivity of administration	❑ not receptive ❑ reluctant ❑ welcoming ❑ enthusiastic
Media programs	Community-based themes	❑ yes ❑ no
Theoretical		
Business model	Not-for-profit	❑ yes ❑ no
Organizational structure	Stand alone NFP	❑ yes ❑ no
Mission match	Agency, Learning, Change, Power	❑ Agency ❑ Learning ❑ Change ❑ Power
Program design	Length of program	❑ 1 week ❑ 2-3 weeks ❑ 4-6 weeks ❑ > 6 weeks
Instruction	Credentialing	❑ Artist ❑ Teacher ❑ Teaching-artist ❑ other
Demographics		
Community challenges	Socio-economics Academics	❑ yes ❑ no ❑ yes ❑ no
Young artists	Age level of students/grade levels	❑ < 12 years ❑ 12-15 ❑ 16-19 ❑ >19
Center clients	Ages served/demographics	❑ youth ❑ teens ❑ adults ❑ seniors
Population density	Urban, suburban, rural	❑ urban ❑ suburban ❑ rural
Program characteristics		
Digital Media	Form of media	❑ audio ❑ games ❑ film/video ❑ photography ❑ other_____

Data Collection Instrument

Multiple Literacy Learning through Community Media Production

Assessment and Evaluation Instrument

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Purpose and Design

The purpose of instrument is to collect data to create an organizational profile about community technology centers that provide digital media arts education to determine if and how the production activities create opportunities for multiple literacy (ML) learning. This instrument is designed to gather data for an ecological profile of the organization, program, and production/instruction.

Data

Data will come from a combination of public information, internal documents, interviews, observations, a focus group, and digital artifacts.

- Public information will consist of the mission statement, website materials, program information, and media productions.
- Internal documents will include planning proposals, board minutes, financial reports, and any other relevant materials.
- Interviews with administrators, instructors, students, and community members will be conducted throughout the study with the inquiry designed to attain perspectives from various individuals on the indicators of ML learning across the organization.
- Observations will be made of instruction and production experiences.
- A short survey will be provided to all participants to gather demographic data and opinions.
- Youth media artwork will be analyzed accompanied with interview questions discussing the work.
- A small focus group will be held with youth media artists, instructors, and CTC staff to discuss ML learning based on experiences that took place within the program.

Analysis

Data will be coded based on defined ML indicators, and analyzed for themes of technological literacy, media literacy, and critical literacy

Section I. Organization

In this section is general information about the organization. This data comes from the public domain, internal documents, and from interviews. Data consist of contact information, the mission statement, governance structure, information about the community, a brief organizational history, general organizational health, planning information, and methods of innovation adoption.

Contact Information

Organization name	
Address	
Adress 2	
City, State, Zip	
Phone	
Website address	
Director / email	
Assistant / email	

Organization's mission statement

Found on the organization's website.

Web Presence

List with examples

Website URL / contents	Status	Themes
Organizational information		
Program information		
Social network		
Resources for the community		
Resources for the field of media arts		

Community information

This information comes from public sources, administrative interviews, and internal documents

Self-described community served	
Geographic characteristics (urban, suburban, rural, international)	
Socio-demographic make-up of community, schools, and participants	

Funding information
This information is found on Federal 990 form, located on the Guidestar.org website rating not-for-profit organizations; in annual reports; or from internal documents.

Operating budget	Attach
Major funding sources	List and attach
Financial reports	List and attach

Media coverage
Internet search; internal documents

Editorial coverage-stories generated in the media about the organization.	List and attach
Press materials-media coverage generated by the organization	List and attach

Organizational Structure and Planning
Internal documents; interviews with administration

List and attach organizational chart; job descriptions; staff development plans; strategic planning documents; other relevant materials; range of services; levels of participation

Board members and affiliations
Internal documents; interviews

List	Affiliations

Brief history of the organization
Internal documents; interviews

Organization establish year:	
Original mission	
Changes over time	
Significant landmark events	

Organizational development
Internal planning documents; interviews

Methods of evaluating organizational success	
Methods of adjusting operations based on evaluation outcomes	

Methods of innovation adoption
Internal documents; interviews

History	
Challenges	
Methods	
Formal plans	
Obstacles	
Outlook	

Community involvement
Interviews; internal documents

Self-described community commitment	
Examples of local community contributions	
Contributions to media arts community	

Section II Program design

The digital media arts program data is comprised of marketing materials, a history, a design of the program, curriculum designs, descriptions of modes of production, and demographics of participants and instructors.

Program title

Program manager information

Name	
Contact information	
Role (s)	

Brief program history

Developed when, why, by whom, how has it changed?

Program goals

The purpose of the program is:	

Learning objectives

After completing this course, students will:	List intended student achievements

Curriculum designs

Length of program	Contact hours instruction and studio time
Forms of instruction	Pedagogy
Assessments	Measures of participants' success

Population in program

Internal documents, survey

Age / grade level	
Ethnic composition	
Socio-economic strata	

Instructors

Teaching artists / credentials	
Self-report proficiency in technology, media literacy; critical literacy concepts	
Involvement in course development	

Evaluation

Methods of evaluating program success	
Methods of modifying based on evaluation	

Section III Production Activities

Production data consist of the specific details of the course being studied including the instructional and student practices in the digital art production process.

Details

Session title	
Times, dates	
Places	
Number of students	
Grade levels in school	
Instructor characteristics	artist, teacher, guest, other
Instructor contact information	

Course content

Instructional content	
Media piece themes	
Means of selecting content	
Methods of idea generation	

Modes of production

ICTs (hardware, software, connectivity)	
Process	
Structure	
Space	Studios; networking virtual & in person

Division of labor

Pre-production	
Production	
Post-production	
Negotiation of production roles	

Outcomes

Experiential instructional	
Experiential production	
Products	
Culminating event	
Distribution	
Feedback loops	

Interviews

Interviews will take as semi-structured interview using prompts. Interviews will also take place on conversational basis about ICTs in media production specifically, and about the CTC in general. Informal interviews with key participants will be conducted to collect data for the above questions. Questions are drawn from the ML indicators, and will be asked of participants across all levels of the organization, with language modified slightly to be appropriate for the specific interviewee. Some participants will be asked to fill in a graphic organizer with prompts in order to reflect before the interview.

Dimensions & skills	Literacies	General Questions
Ways of thinking		
Creativity /Innovation	*ICT/Info*	1. Tell me about what you think is an interesting media project.
Critical Thinking	*Media*	2. How do you select the content for your projects?
Meta cognition	*Critical*	3. What is the process you go through when planning a project?
Ways of working		
Communication	*ICT/Info*	4. What are the ways you use new media to communicate in your community?
Collaboration	*Media*	5. What ways do you work with other people when you are involved in a media project?
	Critical	6. When you are working on a media project, what does it mean to you to be inclusive?
Tools for working		
Info literacy	*ICT/Info*	7. Do you use ICTs in your daily life? How? Why?
ICT literacy	*Media*	8. How do you handle it when new media innovations come along?
	Critical	9. What social networks (virtual and live) do that you take part in?
Living in the world		
Citizenship-local & global	*ICT/Info*	10. How can learning to making media help your community? Or can it?
Life and career	*Media*	11. How can learning about making media help your life and career? Or can it?
Personal & social responsibility; Cultural & social awareness	*Critical*	12. How has your work made an impact on the community? Or has it?

Sample Questions for Specific Participants

Administrative staff

Sample questions that will be asked of the administrator include: how does the organization adopt innovations; how do they manage internet usage to allow for collaborative and web 2.0 experiences; what are the ways in which youth take part in community-based projects; what is the organization's mission in regard to providing literacy education; what are some examples of innovative ways youth use digital media to create change in their communities? What are some of the challenges that have been addressed to provide digital arts experiences? How do you manage resources to allow students access as well as the time to explore?

Instructional staff

Sample questions to be asked of the instructor will include: What are the program objectives? What are the activities that the youth take part in during the program? What kind of training do you provide for using the equipment? What are the explicit lessons that take place to teach technological literacy, media literacy and critical literacy? What are some of the activities that the students do to demonstrate how they are learning? How was this program developed? Did it take place as you expected or were there surprises along the way? What are some aspects that you would change, given the chance? What are some examples of what has worked and what has not? How do you see these projects benefitting the participants beyond their time in this program

Young media artists

Questions will be geared toward their work with informal interviews taking place while looking at the students' artwork. Are they able to create projects that reflect participatory learning culture in that they are collaborative, self-directed, and based on their own interests? What are some of the technological challenges that you face? How do you learn to use the software and equipment? Is there anything that you would like to use that you do not have access to? What are some of the images that you are using? Where did you get the images? What is the purpose of your project? How do you collaborate with other people in and out of your class? Are you involved with the community in your projects? What are the kinds of projects that you like to do? How do you share your work with other people? What do you hope to accomplish with this work?

Observation Guide

What is the nature of instruction? How does the instructor lead the class? What are the methods of instruction? Are the students working independently? Are they collaborating? How? What are the activities? How are projects managed? What is the layout of the space? How are they using it? What are the activities taking place outside of instruction and production?

Appendix B – Chart of Potential CTC Research Sites

Considerations	Criteria	Scales	Media Bridges	CATC	Waycross Media	Grand Rapids	Dayton Access TV
Primary							
1) Organizational structure	Community media arts center	❑ yes ❑ no	yes	no	yes	yes	yes
2) Enrichment programs	Youth digital media arts	❑ yes ❑ no	Yes	yes	yes	yes	no
Secondary							
Pragmatic							
Geographic location	Travel distance	❑ < 50 miles ❑ 50-99 miles ❑ 100-250 ❑ >250	< 50	< 50	< 50	> 50	> 50
Scheduling	Duration on site	❑ 1 week ❑ 2-3 weeks ❑ 4-6 weeks ❑ > 6 weeks	1 week	none	6 weeks	none	none
Access to site	Receptivity of administration	❑ not receptive ❑ reluctant ❑ welcoming ❑ enthusiastic	Ethusianstic	not asked	not asked	not asked	not asked
Media programs	Community-based themes	❑ yes ❑ no	yes	no	yes	yes	yes
Theoretical							
Business model	Not-for-profit	❑ yes ❑ no	yes	yes	yes	yes	yes
Organizational structure	Stand alone NFP	❑ yes ❑ no	yes	yes	yes	yes	yes
Mission match	Agency, Learning, Change, Power	❑ Agency ❑ Learning ❑ Change ❑ Power	learning, agency	website down	no mention of any	neutral connector"	empowers, learning
Program design	Length of program	❑ 1 week ❑ 2-3 weeks ❑ 4-6 weeks ❑ > 6 weeks	1 week	none	six weeks	none	none
Instruction	Credentialing	❑ Artist ❑ Teacher ❑ Teaching-artist ❑ other	teaching-artist	na	several instructors	na	na

Considerations	Criteria	Scales	Media Bridges	CATC	Waycross Media	Grand Rapids	Dayton Access TV
Demographics							
Community challenges	Socio-economics Academics	❑ yes ❑ no ❑ yes ❑ no	challenged	challenged	varied	varied	varied
Young artists	Age level of students/grade levels	❑ <12 years ❑ 12-15 ❑ 16-19 ❑ >19	< 12	na	na	na	na
Center clients	Ages served/demographics	❑ youth ❑ teens ❑ adults ❑ seniors	adults and teens Not-for-profits	teens some adults	adults youth	adults & teens	adults
Population density	Urban, suburban, rural	❑ urban ❑ suburban ❑ rural	urban	urban	suburban	small urban	urban
Program characteristics							
Digital Media	Form of media	❑ audio ❑ games ❑ film/video ❑ photography ❑ other_____	video	photography	arts, photo, fitness trips, cooking, and video	none	none

Appendix C – Media Bridges, Cincinnati Inc. Profile

Section I. Organization

In this section is general information about the organization. Data comes from the public domain, internal documents, and from interviews. Data consist of contact information, the mission statement, governance structure, with information about the community, a brief organizational history, general organizational health, planning information, and methods of innovation adoption.

Contact Information

Organization name	Media Bridges Cincinnati, Inc.
Address	1100 Race Street
Address 2	
City, State, Zip	Cincinnati, OH 45202
Phone	513-651-4171
Website address	MediaBridges.org
Director / email	Tom Bishop, Executive Director / Tom@mediabridges.org
Assistant / email	Lee Snow / Lee@mediabridges.org

Organization's mission statement

Media Bridges Mission

Media Bridges provides the education, equipment, and environment to assist people in communicating effectively through media.

Media Bridges offers solutions to the community's communication needs by offering a means for citizens to let their opinions be heard - by voicing concerns using various tools of media such as television, radio and the internet. Media Bridges provides free media production classes to any individual or group. We set out to create a welcoming space for the public to come together to find solutions and share them. Not only does Media Bridges offer free classes, but also offered are the means to create media productions. Media Bridges loans out equipment for free, library style, including cameras, microphones, computers and studios, so that people can create messages to take to the citizens of Cincinnati via Media Bridges' cable channels, internet radio station or websites.

(Mediabridges.org)

Range of services – Media Bridges

Affordable non-profit media services
Free television production training
On-site television studio, available for public use
Video editing facilities, available for public use
Cameras and production equipment available for public use
Public access television programming
Community technology centers
Low frequency public radio station (WVQC FM)

Web Presence

Website	Themes
Organizational information	Mediabridges.org
Social network	Mediabridges.org is not a 'log in' site http://www.wvqc.org Radio station site has membership capabilities
Resources for the community	Services; advertising

Resources for the field of media arts	Production, education, equipment, facilities, non-profit production services

Community information
Information from public sources, administrative interviews, and internal documents

Self-described communities served	Urban core of Cincinnati; Cincinnati residents; Media literacy community;
Geographic characteristics (urban, suburban, rural, international)	Urban core of the city of Cincinnati Low frequency radio signal of >5 miles
Socio-demographic make-up of community, schools, and participants	Over-the-Rhine neighborhood; City of Cincinnati; outlying communities; only limitation is for equipment use based on residency requirement due to city contract.

Funding information
This information can be found on either a Federal 990 located on the Guidestar.org website rating not-for-profits; in annual reports; or from internal documents.

Operating budget	Attached 2010 Budget provided by Tom Bishop
Major funding sources (with %)	City of Cincinnati

Media coverage
Internet search; website news

Editorial coverage-stories generated in the media about the organization.	Media Bridges hiring two, expanding services www.soapboxmedia.com/innovationnews/0301cincinnati-media-bridges-expands.aspx (Published March 1, 2011 / retrieved March 14, 2011)
Press materials-media coverage generated by the organization	Radio station wvqc.org most recent post is May 4, 2010. Media Bridges.org most current post is June 2010 (as of March 2011)

Organizational Structure and Planning
Internal documents; interviews with administration

List and attach organizational chart; job descriptions; staff development plans; strategic planning documents; other relevant materials; range of services; levels of participation

Interviews conducted with Executive Director, Tom Bishop; Development Director, Christa Zielke; Education Director (now former) Christian Appleby; Media Specialist and Assistant to the Executive Director, Lee Snow; and, Access Coordinator, Rob Wilson.
Job descriptions are attached.
Also attached are research reports from the University of Cincinnati Ohio Poll (2010)
and Needs Assessment report

Board members and affiliations

Brad Schwartz, CPA - President Barnes, Denning & Co., Ltd.	Sandy Eichert - Trustee
Kurt Hunt - Trustee Attorney at Law, Dinsmore & Shohl LLP	Christine Macaulay - Trustee Tax Accountant US Bank
James Szuch - Trustee	Neal Patel - Trustee

Assistant Vice President, Fifth-Third Bank, Greater Cincinnati Suzanne T. Mitchell, CPA - Treasurer Suzanne T. Mitchell & Associates, LLC Meaghan Connor - Trustee Senior Human Resources Generalist – US Bank	Attorney at Law – Frost Brown Todd, LLC Thomas N. Walton Jr. Innovator/IT Consultant – Sakal Technology (Source: MediaBridges.org 3/14/2011)

Brief history of the organization

Internal documents; interviews

Organization establish year:	1988
Significant landmark events	

The History of Media Bridges (MediaBridges.org)

Founded in the winter of 1988/1989, the City of Cincinnati made the decision to begin operation of its Public and Educational Access Channels on Time-Warner Cable through a third party contractor. In February 1989 - Cincinnati Community Video is founded as a 501(c) 3 organization and submits a bid for the contract to operate Cincinnati's Public & Educational Access Channels. The city of Cincinnati awards the contract to Cincinnati Community Video and operations begin July 17, 1989. Operations continue and in July of 1996 Cincinnati Community Video is granted a new 15-year contract. According to their website, as the technology behind media creation evolves, becomes less expensive and more user friendly, the organization evolves with it, emphasizing complete media literacy over basic equipment operation. The new vision drives a new name. In 1999 the Board of Trustees makes the decision to change the name of the organization to better reflect the services offered by the organization.
Community members provide over 325 names that are placed before focus groups to determine community response and value. Media Bridges is selected as the name that best reflects the mission and services of the organization.

A new facility is needed. As a part of its strategic planning process, the Media Bridges Board of Trustees makes the decision move the facility to Over-the-Rhine, once Cincinnati's center for the arts and now the city's poorest community. There the organization could help drive the area's renaissance as an art and entertainment district and better serve a neighborhood often neglected in city development plans. Media Bridges moves to temporary space in Over-the-Rhine in July 2001 then into its new facility in Over-the-Rhine in March 2002, doubling the space and equipment of previous facilities. This lays the foundation for the future. In 2006 Media Bridges launches Cincinnati Stories, a mobile video booth where members of the community record their impressions of the arts, culture, happenings and history in Cincinnati. In 2008 Media Bridges shifts its media to an internal digital server, allowing for seamless workflow of digital media. In 2008 Media Bridges is granted a construction permit for a Low Power FM radio station and begins building a new outlet for community media in Cincinnati. In 2010, WVQC FM goes on the air

Methods of innovation adoption

Internal documents; interviews

Challenges	Budgets, ability of community to broadcast HD in their homes; ability of editing computers to handle HD footage; camera flexibility; city contract

Community involvement

Interviews; internal documents

Self-described community commitment	Local OTR; City of Cincinnati; regional and national media community; not-for-profit communities
Examples of local community contributions	Producers in OTH; Film Outside the Line; CPS school board meetings;
Contributions to media arts community	Advocacy efforts

Section II Program design

The digital media arts program data is comprised of marketing materials, a history, a design of the program, curriculum designs, descriptions of modes of production, and demographics of participants and instructors.

Media Bridges conducts several different types of programs and offers many services. To conduct an ecological evaluation, it is important to identify the range of programs as well as selecting one program upon which to focus. The information below is for the one program that was observed.

Program title

Summer Youth Production Camps

Program manager information

Name	Lee Snow
Contact information	Lee@MediaBridges.org
Role (s)	Media Specialist; instructor

Brief program history

Developed when, why, by whom, how has it changed? The summer production camps have been taking place for many years (not sure). They had always been free and had good numbers (of participants). Last year, they charged for the camp and had a hard time filling them. The rates were lower cost than the 'Y' camps with more contact time, but the perception was that they had been free and were no longer free. This year the camps were offered without cost and had filled very quickly.

Program goals

The purpose of the program is: Expose youth to media production—the technology and media literacy—and for them to enjoy themselves.

Learning objectives

After completing this course, students will have (List intended student achievements): * contributed to the writing of a script * operated a video camera, recorded sound for a production *acted in production *experimented with editing software; searched for special effect images and sounds

Curriculum designs

Length of program --- one week	Contact hours instruction and studio time -- 10 hours
Forms of instruction ---- participatory	
Assessments – had fun? made video?	

Population in program

Internal documents, survey

Age / grade level	8 – 12 years old
Ethnic composition	5 Caucasian (2 male; 3 female); 1 African American female
Socio-economic strata	Not socio-economically challenged (perception)

Instructors

Teaching artists / credentials	BFA in Electronic Media from UC

Self-report proficiency in technology, media literacy; critical literacy concepts	Very proficient
Involvement in course development	Very involved

Section III Production / Instructional Activities

Production data consist of the specific details of the course being studied including the instructional and student practices in the digital art production process.

Details

Session title	Summer Youth Basic Production Camp 8-12 year old
Times, dates	August 9-13, 2010
Places	Media Bridges Cincinnati, 1100 Race Street, 45202
Number of students	six
Grade levels in school	Four through sixth
Instructor characteristics	Teaching artist and media specialist
Instructor contact information	Lee@mediabridges.org

Course content

Instructional content	Using video equipment to produce one piece
Media piece themes	Selected by the youth in camp—fairy tale parody
Means of selecting content	Delphi consensus building technique
Methods of idea generation	Brainstorming

Modes of production

ICTs (hardware, software, connectivity)	Video camera, audio recording, internet, editing software
Process	5 days—1.5 story generation, 2.5 shooting, editing .5 screening
Structure	
Space	Studios and locations

Division of labor

Pre-production	All students did all positions-writing, shooting, acting, audio, editing
Production	
Post-production	
Negotiation of production roles	Some negotiation, some direction by instructor

Outcomes

Products	Experience and one video
Culminating event	Screening and pizza party with parents
Distribution	Broadcast (?) on Media Bridges Educational Channel
Feedback loops	Short camps do not have evaluations—longer programs do

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Education

University of Cincinnati—College of Education, Criminal Justice, and Human Services (CECH)
PhD in Educational Studies—June 2011
Certification in Program Assessment and Evaluation

Research Agenda:
Social and cultural aspects of arts, education, and technology; and
Increasing access to technology education opportunities through digital media arts

Dissertation:
Touching Mercury In Community Media: Identifying Multiple Literacy Learning Through Digital Arts Production

Columbia College, Chicago—Arts, Entertainment, and Media Management
Master of Arts focusing on video and film production 1997
Thesis project: *Sing 'n Sign for Fun*—Producer of Emmy Award-winning educational video

School of the Art Institute of Chicago, Department of Art History, Theory, and Criticism
Graduate studies in film & curatorial practices 1990-1992

Eastern Michigan University—Arts Management & Marketing
Bachelor of Science—Not-for-profit organizational development & fundraising 1988