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New Media Literacies By Design: The Game School

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Abstract

Gaming literacies are collections of activities, ways of thinking and participating, designing and playing, all of which contribute to a set of interrelated and interdependent complex systems for thinking about games and gaming. This chapter discusses a media practice sometimes referred to as "games-based thinking" or "gaming literacies" as they are conceived of by the creators of the Game School, set to open in New York City in 2009. The school is designed to highlight these gaming literacies and use them as a framework for developing an entire sixth-grade curriculum. The school is in its early stages of development but tools and ideas around gaming literacies are underway. This chapter discusses these tools and ideas in-progress.

New Media Literacies By Design: The Game School

In late 2006, Henry Jenkins, et al., produced a working paper that debuted alongside a new commitment from the John D. and Catherine T. MacArthur Foundation. In the paper, Jenkins and his co-authors characterized the emerging field of media literacy as focused on consumption of media and called for an extension of the traditional concepts of media literacy to connect with theories for new media and learning. In order to propel media literacy research forward, they argued, it is important to investigate media consumption and production, but also participation. Participation within a culture "shifts the focus of literacy from one of individual expression to one of community involvement," (Jenkins, et al., 2006, p. 7). These MIT researchers' perspective on media literacy education argues for an organic understanding of learning and knowing, one built on the scholarship of researchers in an emerging, trans-disciplinary area of scholarship referred to as the learning sciences (Sawyer, 2006).

Confronting the Challenges of Participatory Culture, the Jenkins, et al. white paper describes a view of media literacy education that includes analysis and interpretation. At the same time, they posit that in order for media literacy education to keep pace with contemporary youth culture, we must also include the culture of media production, which combines newer tools and changing contexts of use. Jenkins and his co-authors envision a "new media literacies" approach to media education, in which a richer understanding of media production and use can be better theorized and applied when considered alongside the emerging research studies in cognitive science, literacy studies, anthropology, and education (Ito, M., et al., 2008; James, C., et al., 2008; Peppler K. and Kafai, Y., 2007; Steinkuehler, C.A. & Duncan, S.C., 2008). These studies, while housed in various disciplines and departments, are generally characterized by a drive to amend traditional instructionist pedagogies based in cognitive-psychological studies of

human learning that focused solely on the individual mind as a receiver of information (Piaget, 1977). Since the 1970s, researchers have gained a richer understanding of human learning as it happens in situated contexts of social participation and collaboration (Bereiter, C., & Scardamalia, M., 1993; Kafai, Y.B. & Resnick, M., 1996; Lave, J. and Wenger, E., 1991; Papert, S. 1991).

The shift in understanding of how humans learn has inspired educators to try and understand how best to design learning environments that provide rich situations for experiencing, doing, and knowing (Barab, S. and Squire, K.D., 2004; Brown, A.L., 1992). Often those environments include multimedia tools and computer networks that enable learners to cooperate in shared situations and solve problems collaboratively. However, it isn't always the case that newer technologies necessarily enable new ways of learning. It may be that some of the tools are new and that they might enable new forms of production, but what matters most in a new media literacies framework is how a community of producers makes those tools meaningful to themselves and their audiences.

As academic advisor to MIT's New Media Literacies Project from 2006-2008, I was often asked to help clarify what was meant by the term "new media literacies." There was some question about whether the term referred to literacy practices with and around new media. That interpretation is accurate to the extent that the media themselves are actually new (e.g., software, digital hardware, etc.), but the truth is that most of what we refer to as "new" media aren't wholly new. Indeed most of the media literacy practices discussed in the New Media Literacies paper (Jenkins, et al., 2006) describe new dispositions toward the "perceived affordances" (Norman, 2008) and (re)applications of media as they exist within their contexts of use. Put that way, it becomes easier to see that the new media literacies are about an appropriation of what the

learning sciences have shown to be particularly salient ways of knowing and learning, making and doing.

Ultimately, the "new media literacies" assign cutting-edge research in the learning sciences to a media literacy context. The main point of the Jenkins et al. paper is that these literacy practices with and around media are wonderful instantiations of the most contemporary knowledge of about how students *learn and participate with media communities in their contexts of use*. They write: "Participatory culture shifts the focus of literacy from one of individual expression to community involvement," (Jenkins, et al., 2006, p. 4), a sentiment that builds upon the collective opinions shared by learning sciences researchers (Design Based Research Collective, 2002). Educational technologists Sasha Barab and Kurt Squire (2004) summarize the view of cognition shared by current learning sciences researchers:

> A fundamental assumption of many learning scientists is that cognition is not a thing located within the individual thinker but is a process that is distributed across the knower, the environment in which knowing occurs, and the activity in which the learner participates. In other words, learning, cognition, knowing, and context are irreducibly co-constituted and cannot be treated as isolated entities or processes. (p. 1)

The new media literacies interpretation of the distributed, environmental, and activity-based concerns of the learning sciences is that of media use and production within the context of a community of participants. In other words, media literacy education should enable students to analyze and understand the usefulness and limitations of Wikipedia, for example. We can teach students to make edits to Wikipedia pages, and all of that is important to students making and using media. And yet, without knowing what it means to participate in the Wikipedia

community, students might never see their efforts move beyond a beginner's understanding of what it means to be a Wikipedia user.

The principle of learning in a participatory context of media consumption and production is one that necessitates new designs for teaching and learning about media. Consequently, it becomes important to move the conversation temporarily away from media tools and texts and instead toward the spaces, places, and communities in and from which they are made and considered. Doing so allows us to consider the situated processes of making meaning with media at the same time we examine the finished products, which allows for a more holistic conception of best practices for media literacy education.

Case Study: The Game School

A progressive example of the participatory, contextual, process-based approaches to media literacy education is Quest to Learn, a proposed new 6th-12th grade public school to be opened to sixth-graders beginning with the 2009 school year. The Quest to Learn school was conceived by the Institute of Play, a New York City-based nonprofit that supports game-based learning contexts in a variety of settings. Led by Associate Professor Katie Salen of the Parsons New School for Design, The Institute of Play collaborates with citizens seeking to partner with academics, scientists, policy-makers, and artists on several projects. In the case of Quest to Learn, The Institute of Play consults with New Visions for Public Schools, a leader in helping redesign and administer many of New York City's public schools, which include its New Century High Schools. New Visions for Public Schools is guiding the important steps required to ensure that the school meets New York city and state curriculum requirements, as it has with many city schools like Quest to Learn that are part of the small schools movement in the U.S. (smallschools.org, 2008). However, the research and design choices that influence how those

content standards are taught are made by the Institute of Play team and the educators at the school.

The mission of Quest to Learn is to build an innovative learning experience for kids that is based in both traditional content learning and what are now being called "gaming literacies" (Salen, 2007). Put simply, Quest to Learn is a school created to provide kids with an experience of learning that is based on the acts of designing, playing, and knowing. Building on the growing research and development in games-based learning, Quest to Learn formally extends the reach of current gaming literacy initiatives already in place in after school programs, museums, and libraries throughout the U.S. In particular, the school builds on initiatives where social interaction and critical reflection are expected learning outcomes (Fields, D.A. and Kafai, Y.B. (in press); Hayes, E., 2008; Hull, G. and Schultz, K., 2001; Joseph, B. 2008; Santo, R., 2007). Students are invited to experiment with potential solutions to problems and to design and test new ones. Perhaps most importantly, learning and gaming literacies are predicated on deep considerations of the contexts in which they exist and the terms under which they are encountered.

Quest to Learn is set to open to sixty sixth-graders for the 2009-2010 school year and will scale out to twelfth grade over several years. At the writing of this article, the Institute of Play and New Visions for Public Schools have just presented the school's proposal to the New York State Department of Education. Since the curricular development process has just begun, the details of the school are still undergoing active revisions. Therefore this case study illustrates the foundations on which the proposed practices and activities of Quest to Learn in order to elucidate the overarching aims and concepts used to build a school based on the principles of games, gameplay, and game design.

The school's curriculum design team initially established core principles of learning for game design and play and then set out to integrate these principles into the development of supportive learning spaces. As such, the Quest to Learn approach to critical literacies is founded on a triad of interpretation, creative production, and situated contexts. The development team contends that by using gaming literacies as the school's core design principle, students are taught to see the world as a series of designed systems, each with its own rich, interrelated parts, puzzles, and problems. Furthermore, educators might work together to develop lessons that link various content areas to one another through an appreciation for and an understanding of that system and how its elements are treated in other subjects.

Quest to Learn's curricular and instructional model is designed to bring together methods for solving a variety of problems: technological, social, communicational, scientific, and creative concerns, including those expressed in Table 1.

[Insert Table 1: Robison.Table1.doc]

Table 1

Game School Ways of Knowing

Ways of Knowing	Description
Systems-based thinking	Students design and analyze dynamic systems, a characteristic activity in both the media and in science today.
Interdisciplinary thinking	Students solve problems that require them to seek out and synthesize knowledge from different domains. They become intelligent and

	resourceful as they learn how to find and use information in meaningful ways.
User-centered design	Students act as socio-technical engineers, thinking about how people interact with systems and how systems shape both competitive and collaborative social interaction.
Specialist language	Students learn to use complex technical linguistic and symbolic elements from a variety of domains, at a variety of different levels, and for a variety of different purposes.
Meta-level reflection	Students learn to explicate and define their ideas, describe issues and interactions at a meta-level, create and test hypotheses, and reflect on the impact of their solutions to others.
Network literacy	Students learn how to integrate knowledge from multiple sources, including music, video, online databases, other media, as well as from other students. In doing so they participate in the kinds of collaboration that new communication and information technologies

	enable.
Productive/tool literacy	Students gain an ability to use digital technologies to produce both meanings and tangible artifacts, including games.

Note. From Salen, K., Torres, R. & Wolozin, L. (2008a). *The Game School planning document: Draft 1.0.* New York: Institute of Play.

Students are immersed in the process of collaborating to solve shared problems through case- and model-based reasoning, project-based learning, and computer-supportive collaborative learning, all hallmarks of contemporary learning sciences research (Sawyer, 2006). And while students will surely play and design games, the principles of learning are informed by game design and play experiences. Furthermore, the participatory culture framework provided by the new media literacies (Jenkins, et al., 2006) offers the key distinction between what it means to add media literacy as a content area to an existing school curriculum as opposed to integrating it fully into the design of the curriculum itself. The new media literacies are about understanding and producing meaning, but they are also about participating in media communities, thereby offering context to what is produced and what it means.

As part of its mission, Quest to Learn also seeks to develop learning systems that recruit complex thinking about how things work and what students need to know in order to design, test, and reiterate those systems in order to make new ones. At present, the school has identified a series of principles, goals, and beliefs that underlie the curriculum and system of the school's design and operation. Although the school is still in its planning stages, it has been proposed according to ten core practices that support every aspect of its design, as described in Table 2.

[INSERT TABLE 2: Robison.Table2.doc]

Table 2

Ten Core Practices Defining The Game School

Core Practice	Description
Taking on Identities	My identity as a learner is complex and evolving as a member within my own community of practice. I am a writer, designer, reader, producer, teacher, student, and gamer.
Using Game Design and Systems Thinking	Everything I do in school connects to my life outside of school through a game design and systems perspective.
Practicing in Context	School is a practice space where life systems I inhabit and share with others are modeled, designed, taken apart, re-engineered, and gamed as ways of knowing.
Playing and Reflecting	I play games and reflect on my learning with them.
Theorizing and Testing	I am learning as I propose, test, play with, and validate theories about the world.
Responding to a Need to Know	I am motivated to ask hard questions, to look for complex answers and take on the responsibility to imagine solutions with others.

Interacting with Others	Games are not only a model for helping me think about how the world works, but also a dynamic medium through which to engage socially and develop a deeper understanding of myself in the world.
Experimenting and Imagining Possibilities	I take risks, make meaning, and act creatively and resourcefully within many different kinds of systems.
Giving and Receiving Feedback	My learning is visible to me, and I know how to anticipate what I will need to learn next.
Inventing Solutions	I solve problems, using a game design and systems methodology: I identify the rules, invent a process, execute and evaluate.

Note. From Salen, K., Torres, R. & Wolozin, L. (2008a). *The Game School planning document: Draft 1.0.* New York: Institute of Play.

The overarching questions that drive curriculum development throughout the school are questions of systems, especially with regard to the "internal architecture of games—rules, components, core mechanics, goals, conflict, choice, and space" (Salen, et al., 2008b). In line with current research in the learning sciences that show the importance of situated cognition (Greeno, 2006; Lave and Wenger, 1991), and project-based learning (Barron, et al., 1998), the school's contexts for learning are imagined as practice spaces whereby goal-based challenges motivate achievement. Expectations for success will be high, yet every piece of the curriculum

will be designed to encourage students to meet those expectations. Taken together, each of these elements defines the overall praxis of Quest to Learn.

From the outset, Quest to Learn was conceived as a unique learning space meant to address the needs of students who are have been underserved by traditional school models. As a consultant to the project since 2007, I have participated the conceptualization process and reviewed internal design documents written by members of the core Quest to Learn design team. These design documents (Salen, et al., 2008a, 2008b) cite multiple studies and reports (Kaiser Family Foundation, 2005; Pew Internet and American Life Project, 2006) that point to the need to re-think and re-design educational institutions to reflect both current research in the learning sciences and cultural shifts in dispositions toward digital technologies and "habits of mind" (Dewey, 1933).

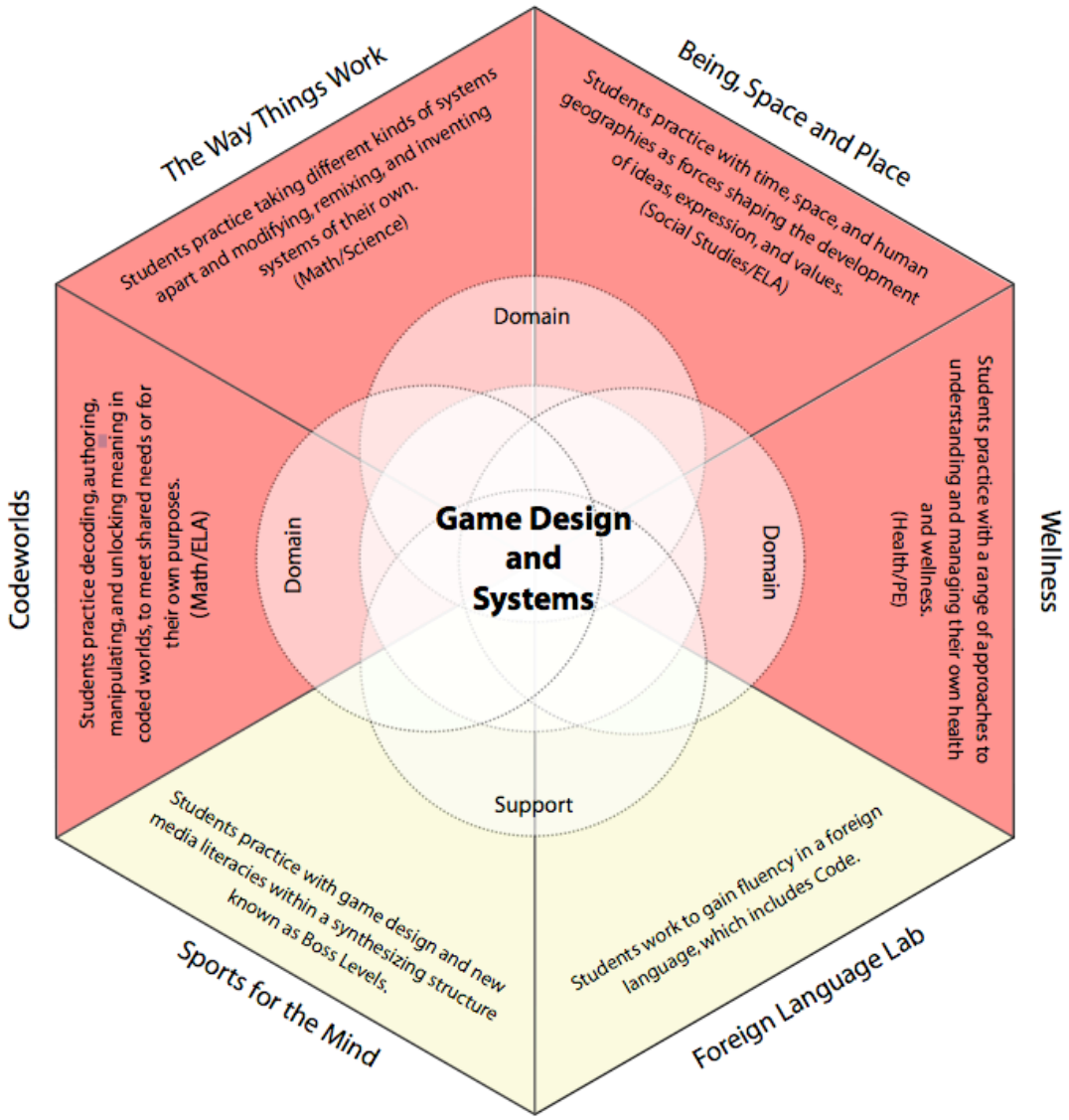
The Quest to Learn development team envisions a curriculum based on an understanding of designed systems (Salen, et al., 2008a). Students will be encouraged to "quest to learn" as they move through a series of content areas packaged as media-rich, sequential coursework meant to help students succeed in four primary domains. Domains reflect an integrated system of learning meant to encourage students to see and understand dynamic relationships between parts of a whole. Quest to Learn's initial plans define each of the four central Domains: "The Way Things Work," (science and math); "Codeworlds," (Math and English Language Acquisition); "Being, Space and Place," (Social Studies/ELA); and "Wellness" (Health/PE). Additionally, the team includes two supporting domains called "Sports for the Mind" and "Foreign Language Lab." Sports for the Mind includes instructed practice with making and using media; the Foreign Language Lab helps students with language learning, which at this school includes coding and the use of software tools. Figure 1 shows a draft diagram used by the Quest to Learn planning

team to communicate its vision for the Quest to Learn Domains of Learning concept.

Game Design and Systems

[INSERT FIGURE 1: Robison.Figure1.doc]

Figure 1. A draft diagram used by the Quest to Learn planning team to communicate its vision for the Domains of Learning concept. Domains reflect an integrated system of learning meant to encourage students to see and understand dynamic relationships between parts of a whole.



Salen, et al. (2008a). Reprinted with permission.

Based on traditional content areas, the Quest to Learn Domains are defined in such a way as to provide a foundation for a curriculum that reflects systems-based thinking. Moreover, Quest to Learn Domains are meant to enable students to understand content areas as interrelated parts of a whole. The development team explains that its goal is to enable learners to move beyond the analytic process of deconstructing a problem "into component parts for discrete examination" (Salen, et al., 2008a, p. 46).

> By examining the interrelationships of elements within whole systems via a game design pedagogy, learners are better equipped to recognize patterns that offer critical insights into the nature and complexity of systems (social, technological, natural, and imaginary) shaping their worlds. (pp. 46-47)

Learning Domains are thus ways of organizing Quest to Learn's theme of game design and systems thinking by aligning the core learning practices described in Table 1 with the relationships between traditional content areas. The result is a curriculum that both reflects and is shaped by the ways in which these content areas interrelate.

Curriculum Structure

Whereas the Quest to Learn team conceives of game design and systems thinking as the "master context" for the four main and two supporting Domains, the units and lesson plans take shape in the forms of "Missions" and "Quests." These terms are taken from two fundamental gaming activities whereby players are presented with expeditions and assignments designed to help them advance. Missions and Quests can also be thought of as macro-level challenges consisting of micro-level sets of problems collectively developed across Domains of learning.

Over three trimesters, every grade level would base its curriculum on an "overarching question" that thematically guides curriculum and instructional design for each Domain. Perhaps

a sixth-grade overarching question might be, "What is the architecture of a dynamic system?" Each of the Domains would use this quest to guide its pedagogy as evidenced in Table 3. For example, "The Way Things Work" teaches math and science concepts and skills. So perhaps its own overarching question would invite students to identify and analyze elements of simple machines in the first trimester, relationships between elements in a second trimester, and the functional significance of those relationships in a third trimester. Each of those questions is thus a more content-specific version of the grade's main overarching question: What is the architecture of a dynamic system? The trimesters are therefore organized by content areas (Domains) but also the guiding question posited to the entire grade over the course of a year.

[INSERT TABLE 3: Robison.Table3.doc]

Table 3

Sample Sixth-Grade Course Structure

Domain: *The Way Things Work* (Math/Science)			
Overarching question: What is the architecture of a dynamic system?			
	Trimester 1: Elements	Trimester 2: Dynamics	Trimester 3: Systems within Systems
Essential questions	What are the qualities and elements of a system?	How do the relationships between elements in a system create a dynamic?	How can a system function within a larger system?
Concepts and	Simple machines are	The interaction of	Complex machines

Understandings	systems. Systems are composed of elements. Elements of systems have different attributes that determine what they can do.	elements (light and matter) creates a set of relationships within a system. The relationships between elements in a system can change. Systems are dynamic.	have systems within systems. Complexity comes from the interaction of multiple systems.

Note. Adapted with permission from Salen, K., Torres, R., Rufo-Tepper, R., Shapiro, A., Wolozin, L., & Schwartz, A. (2008b).

Consider the "Being, Space and Place" domain in which the traditional content areas of history, social studies, and geography might be integrated. Within this Domain, the authors of the Quest to Learn planning document suggest a Mission titled "Spartan Private Investigators" that could be developed in order to build upon a year's worth of systems-understanding curricula. So let's say the first trimester in the Being, Space and Place domain of sixth grade asks students to think about the qualities and elements of a system. The Spartan Private Investigators Mission might be introduced in the second trimester to intensify their understandings of how human civilizations develop through a consideration of how systems function as parts of a whole.

As it is described in the Quest to Learn planning document, students would be presented with an international conflict and then would be expected to build on previously learned understandings of the contexts in which conflicts occur between civilizations (Salen, et al., 2008b, p. 73). The Spartan Private Investigators mission directs students toward a specific context—in this case, the era when Sparta must consider the best strategies for reacting to

Athens' hostilities toward them. In the process, historical events, physical geographies, and the implications of various resolution strategies (war, diplomacy, neutrality) are variables that must be understood and reckoned with in order to move toward a winning decision on Sparta's best methods for resolving the conflict. Students then present a final argument to the political leadership of Sparta, a "Council of Elders," whose makeup might include other students, teachers, support staff, or older peers.

Each proposed Mission for Quest to Learn Knowledge Domains is designed to address the learning goals aligned with New York State standards across the curriculum (in this case, English language arts and social studies). Additionally, educators specify what are called "Enduring Understandings," which are outcomes particular to this lesson. As Spartan Private Investigators is conceived, its Enduring Understandings are: "Students will understand that 1) societies interact with each other through a variety of hierarchical systems, and 2) complexity comes from the interaction of multiple elements" (Salen, et al., 2008b, p. 74). Furthermore, "Essential Questions" are meant to guide the shorter "quest" assignments: "How does conflict arise and how is it resolved for a system (Sparta) within a larger system (Ancient Greece)? How do the actions of one society impact other societies?" (p. 74). Taken together, these guiding principles for lesson plan and activity development provide the grounding for a learning experience from which new media literacies emerge.

Quests—the segmented activities that together make up and speak to the larger Missions—are to be developed by teachers, in collaboration with one another. Quests might be designed to take a week or more from a ten-week trimester to give students practice with the larger concepts of the Mission. Because the final piece of assessment for the mission is a formal oral presentation in which students develop policy briefs and engage in policy discussions from the

perspectives of Greeks and Spartans, the Quests should prepare them for that exercise. Along the way are incremental, lower-stakes assessments such as journals, tests, notes, vocabulary, podcasts, maps and simulations. However, each of these pieces is tied directly to its quest and serves as a scaffolding tool to incrementally move students toward the goal of the Mission itself. In other words, these assessment pieces provide the necessary means by which students contribute to the problem that they are working on together. The conditions for which a participatory culture exists are met: students are creating artifacts in a collaborative, social way and are "meant to believe that their contributions matter" (Jenkins, et al., 2006, p.5).

As a proposed unit and lesson plan, *Spartan Private Investigators* has integrated the new media literacies concept of participatory culture in such a way that opportunities to affiliate, express, collaborate, and circulate are fully integrated into its curriculum. Instead of adding a new media literacies-influenced lesson plan to an already packed curriculum, Spartan Private Investigators is *by its design* an example of participatory culture. Students participate in the culture of narratives, histories, objects, and archives of ancient Greece and Sparta, but how they do so is cultivated from the context of the problem they're trying to solve. If a Quest requires them to "gather, document and synthesize information on the culture, history, and politics of Sparta," they do so together as they read, write, discuss, and share what they are learning with the distinct purpose of understanding the cultural contexts that support those activities (Salen, et al., 2008b, p. 75). Writing is not directed to a generic, unknown reader; students know their audiences and speak directly to them in a voice attached to the identity they assume (a Spartan warrior, for example). The sharing of information and artifacts is purposeful; critiques and responses to what is shared are directed toward the reasons for doing so.

Since systems-based thinking is a foundational learning goal at Quest to Learn, each Mission design and its series of Quests should encourage students' reflection on their learning in other domains. For example, during the 10-week *Spartan Private Investigators* Mission, a Quest invites students to participate in a role-playing exercise that recruits knowledge from a previous trimester. As outlined in the Quest to Learn planning document, students are presented with the mythical Pythia, Apollo's high priestess, who inspires students to "travel back in time to solve a pressing problem in Ancient Greece between Sparta and Athens" (Salen, et al. 2008b, p. 75).

> Pythia communicates to the students through oracles (riddles) that are embedded with key vocabulary. Her messages are delivered to students via the pathways of light that students developed in the previous trimester in The Way Things Work [domain]. Pythia's oracles present challenges to students, which require them to gather, document, and synthesize information on the culture, history, and politics of Sparta. They use this information to develop believable identities as Spartans. (Salen, et al. 2008b, p. 75)

Even though students are participating in a different knowledge domain, the design of the Quest makes it necessary for them to understand how this learning context makes previously learned material more relevant. Therefore when educators develop curriculum around systems-based thinking, they must work with one another to ensure a reciprocal relationship among the students' learning experiences.

Toward Partcipatory Media Contexts for Future Learning

It cannot be emphasized enough that the contexts in which media are produced are at the heart of participatory media: these contexts are what inspire and regenerate their emerging artifacts and activities. Any kind of focus on individual performance then must come from a

context of meaningful participation. Likewise, it should be assessed on the basis of its perceived acceptance in the community with which it is affiliated. By this model, the purpose of instructional design involves creating interesting problem spaces, many of these linked to already-established participatory communities.

The concept that new media literacies can and should be emphasized in learning spaces like the Quest to Learn school extends beyond the eleven "skills and competencies" from Jenkins and his co-authors: in short, these include social and collaborative skills like negotiation, networking, appropriation, and performance (Jenkins, et al., p. 4). While it may be true that each is important to 21st-century learning and instruction, it is important to note that these skills and competencies are not necessarily new or even unique to digital tools and technologies and are already in wide use in the culture of participation. In fact, the New Media Literacies Project at MIT seeks to develop curriculum and professional development activities that highlight both digital and analog media experiences, because it is often at the intersection of both where the most interesting learning and production happens (Black, 2008). Quest to Learn's curriculum makes clear that a school built on game-based learning is about a particular orientation toward the underlying systems of the world and how they operate, connect, and influence one another. That concept is by no means limited to analog or digital hardware, software, or media. More importantly, it fosters knowledge creation with the context of their use.

For example, when a student makes a mash-up of his favorite three hip artists' videos, he needs to know how to use the software. But he also needs to know which distribution channels are best for that creation. YouTube will get him the most hits for sure, but if it's a video that samples copyrighted work, it's likely that YouTube will remove it from their site, regardless of whether a formal complaint exists. Since YouTube's popularity is so high, if the student's video

is removed, it could be said that it's been "killed" on the internet, lest it be captured by sites like YouTomb, which stores any metadata related to YouTube's complaint (MIT Free Culture Group, n.d.). There is the possibility that other video-sharing websites might not use the same violation-searching algorithm that YouTube does, but the student would have to immerse himself in the video mash-up communities in order to learn that it might be better to share a video on Vimeo or BlipTV instead. Making these decisions is why learning about and understanding various systems of media participation is just as meaningful and valuable as knowing how to use the tools to make these media.

Knowing how, why, when, and to what to degree we can express ourselves with media texts, tools, and cultures are the foundations for meaningful participation and affiliation with media communities. Indeed, as Jenkins and his co-authors explain, affiliations are at the heart of participatory media (Jenkins, et al., 2006, p. 9). But perhaps the term "affiliation" isn't as accurate as it could be, since when taken out of the context of full-fledged participation, it seems to effect an idea of simple sponsorship rather than immersive connectedness to a media activity, community, brand, franchise, or set of practices.

For example, I might affiliate myself with people who like the internet music sites and radio stations Last.fm or Pandora stations, but that affiliation becomes more than a "checked box" when I consider the fact that these music listening communities are built on a shared social network of listeners and "genomic data" that classifies artists, genres, and songs, all of it culled from the listening habits of its users. Those listening experiences are made richer by our interactions with them. For me, Last.fm is made more interactive when I use its "scrobbling" feature, which tracks the music I listen to and stores the data so that my friends and I can keep track of each other's current favorites. Some users have begun using that data to generate

sophisticated visualizations, which they then post on the web for others to share. At that point, listening to music on the web isn't the same as listening to it on the radio. But it's not just about the tools, either. Understandably, the tools are important, but only to the degree that they enable me to affiliate and participate in a more meaningful way with the shared media experience.

Another good example of the participatory culture concept can be seen in the uses of the popular Flickr photo-sharing website. When I first learned of Flickr, I saw it only as a place for online storage of my digital photos. I uploaded all my photos and organized them neatly into sets, where I could title them individually and describe each set. Soon I learned that I could also invite others to see the photos by sharing individual links that would direct them to each one. Then I learned that I could tag them with words used to describe them, so photos of my dog were tagged with her name, Annie. For fun I also tagged them with the words "dog" and "pug." Since I have over a thousand photos altogether, assigning the tag "Annie" helped me find hers more easily when I searched through my personal photo archive.

I was surprised when one day I received a message from an owner of a group on Flickr called "Pugs." She had done a search of all the photos on Flickr and found mine. She asked me to join the group so that I could contribute my pug photos, too. I did, and now I enjoy seeing photos of other people's pugs. Of course then I wondered what other Flickr groups were out there, and I soon started tagging my photos with broader terms in hopes that other users doing a wider range of searches would see my photos. After a while, I was asked to join several different groups whose subject is signs--road signs, historic signs, funny signs, etc. Therefore if I see the photo sharing website Flickr as just a place to upload my photos and keep them organized, I'm not a full participant in the affordances offered by it. However, my experiences with the site makes it clear to me that Flickr is about much more than its technological offerings.

Literacy scholars Colin Lankshear and Michele Knobel (2005) also support the more ecological approach to media literacy education described by Jenkins and his co-authors. For example, Jenkins, et al. state: "It matters what tools are available to a culture, but it matters more what that culture chooses to do with those tools" (2006, p. 8). To Lankshear and Knobel, the shift from focusing primarily on media tools toward a focus on culture is an ontological one. Lankshear and Knobel state plainly that they see new (media) literacies as indicative of a participatory, collaborative, and distributed ethos, one that can be contrasted with a technical, physical, and material mindset. Throughout their book titled *New Literacies: Everyday Practice and Classroom Learning* (2006), they argue that too often, we characterize the value of emerging creative tools and practices as just new ways of doing the same things we used to do, only with new objects that make our jobs speedier and more productive, an attitude which unfortunately fails to understand the cultural shift that goes along with a new literacies disposition.

Lankshear and Knobel (2006) emphasize that traditional literacies (and schooling) are still entrenched in a "physical-industrial" mindset that is "individualized, enclosed, product-centered, and hierarchical" (p. 38). What's changed is that the physical-industrial mindset co-exists with a "cyberspatial, post-industrial" mindset in which our ways of knowing, being, and doing are more collective, distributed, change-based, and de-centered (Lankshear and Knobel, 2006, p. 38). In other words, what's "new" about new literacies is not just that we are working with new tools: it's not just about the products. What's new is the co-existence of new products and old tools, and of habits and orientations toward both. That is, it is less important to note whether one's creative affiliations are centered on costume play or knitting; what matters is the depth of involvement, the peer-to-peer relationships, and the levels of expertise and ethos community

members feel and exercise in that space. A focus on the commodity misses the point—it is what we do, think and know within the context of its community that is significant.

The Quest to Learn school is designed on a model of media literacy that reflects a holistic experience of immersion within a context of problem-solving, co-designing, and systems-based thinking. Newly available tools and technologies are already part of the curricular package, which means that the focus of instruction is on the activities that are enabled by them. Education at Quest to Learn is based on new media literacies to the extent that from the bottom to the top, lessons reflect the culture of our participation with media as well as our everyday use of it. With this school we have a particular model of learning with new media tools that is inclusive of their cultures, which means that there can be no means for learning without deep immersion in the contexts of the problems we're trying to solve. By its design, the Quest to Learn school is an acute example of a formal learning environment built to reflect developing insights into the valuable expressions and experiences surrounding new media literacies.

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Table 4

The New Media Literacies: Participatory Culture

A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at the least they care what other people think about what they have created). Forms of participatory culture include:

Affiliations — memberships, formal and informal, in online communities centered around various forms of media, such as Friendster, Facebook, message boards, metagaming, game clans, or MySpace).

Expressions — producing new creative forms, such as digital sampling, skinning and modding, fan videomaking, fan fiction writing, zines, mash-ups).

Collaborative Problem-solving — working together in teams, formal and informal, to complete tasks and develop new knowledge (such as through *Wikipedia*, alternative reality gaming, spoiling).

Circulations — Shaping the flow of media (such as podcasting, blogging).

A growing body of scholarship suggests potential benefits of these forms of participatory culture, including opportunities for peer-to-peer learning, a changed attitude toward intellectual property, the diversification of cultural expression, the development of skills valued in the modern workplace, and a more empowered conception of citizenship. Access to this participatory culture functions as a new form of the hidden curriculum, shaping which youth will succeed and which will be left behind as they enter school and the workplace.

Note. From Jenkins, H., Purushotma, R., Clinton, K., Weigel, M., & Robison, A. (2006). *Confronting the challenges of participatory culture: Media education for the 21st century*. Chicago, IL: The John D. and Catherine T. MacArthur Foundation, Digital Media and Learning Initiative (p. 5).