Interview with James Paul Gee

This is the transcript of an interview with James Paul Gee conducted over email in October 2011 by Crystal Benedicks.

In the nineties, you were a pioneer of what was and is called New Literacy Studies. Now you see your work as part of a movement called Digital Media and Learning. What are the distinctions between these areas of study?

Sadly, my work on the The New Literacy Studies started in the 1980s. I am an old man. The New Literacy Studies was about traditional literacy; that is, it was about reading and writing. It argued that reading and writing are not primarily mental things. They are primarily social, institutional, cultural, and historical practices. Literacy practices are rarely just composed of reading and writing all by themselves. They are usually connected to and caught up with ways of talking, acting, interacting, valuing, believing, and being in the world. They are connected to socially distinctive "kinds of people" (to take a phrase from Ian Hacking), like being a kind of "good student," "radical feminist," "cutting edge physicist," "African-American," "corporate board member," "gamer," "Christian fundamentalist," "postmodern English professor," and so on and so forth through an nearly endless array of historically produced identities. I called these socially distinctive ways of being in the world "Discourses" with a capital "D." Discourses are ways of using oral and written language, as well as ways of acting and interacting, valuing, believing, dressing, and using various sorts of tools and technologies at various sorts of places and times so as to get recognized as enacting a particular socially distinctive identity or "kind of person." Too often schools teach literacy in ways that are detached from the Discourses that give language and literacy meaning and marry them to ways with words, thoughts, and deeds.

The New Literacy Studies was later supplemented by a newer movement, confusingly called "The New Literacies Studies." The New Literacies Studies studied not just traditional literacy, but new so-called "digital literacies" and "multi-modal literacies." The New Literacies Studies views any way of making and taking meanings as "a literacy." Just as print is a technology of making and taking meaning, so, too, are digital technologies like video games and social media. As with the New Literacy Studies, the New Literacies Studies sees technologies like print or a video game as part and parcel of distinctive practices and

Discourses that include much more than the technology itself. Furthermore, both movements argue that technology (including print and digital media, as well as things like computers and television) have no effects apart from the practices and Discourses in which they are embedded (though they may, indeed, have certain affordances). They have different effects—sometimes good, sometimes bad, and sometimes neutral— in different practices and different Discourses.

I wrote my first book on video games (*What Video Games Have to Teach Us About Literacy and Learning*, First Edition 2003) as part of a yet newer movement sometimes called "Digital Media and Learning." This movement got a lot of its impetus from generous funding from the MacArthur Foundation. The movement was, in part, guided by the MacArthur Foundation (especially Connie Yowell) and those it funded, though it is much bigger now. I intended my book to be a "virus" to carry my ideas about literacy, but it came out just as video games were getting to be a hot topic for debate, especially in terms of how they could be recruited for learning things like innovation, design, and 21st century skills. So the book got read as an argument for using video games in school. It was no such thing. I was arguing that modern video games recruit good learning principles; that is, they "teach" well. They have to do so because they are long and hard. If no one could learn them, the companies that make them would go broke. I realized in playing games myself (something I started around 2002) that they incorporate principles of deep learning supported by research in the Learning Sciences, but not much used in our schools. I called this type of learning "situated embodied learning." Such learning always marries words and information ("content") to images, actions, experiences, goals, and dialogue that learners have interacted with in specific contexts where these words are used or apply. Furthermore, the contexts are ones where the learner must form goals and take actions to solve problems, not just memorize facts and formulas. Finally, such contexts are often, in different ways, social and collaborative, as learners form "communities of learners" (what I have called "affinity spaces") to engage with an interest or passion they share with others.

What are some examples of promising work in Digital Media and Learning? What do you see as the goals of this area of study?

As work on digital media and learning has progressed, it has given rise to research and new businesses of two contrasting sorts. There are people who want to use digital media to improve our schools (K through college) as they are, not to challenge them fundamentally. They want to help our schools do better what they already do, which is largely information transmission. Then there are people who want to use digital media—in my case, not just digital media, but situated embodied learning—to change the paradigm not merely of schooling in society but of learning across society and all its institutions. I fall into this latter camp. We want to encourage people of all ages, across all spheres of their lives to engage with new learning and innovation; with production and not just consumption; with participation and not just spectatorship; and with problem solving as knowledge producers, designers, civic participants, and members of the public sphere. We want to see active learning for the public good as something that crosses and integrates all institutions, not just schools. We want to see all institutions as learning institutions producing active knowers as national and global citizens. There is a deep equity goal at the heart of all this. Developed countries across the world are pooling wealth and opportunity into fewer and fewer hands. The rich are getting richer and everyone else is getting poorer. The rich are determining, through their economic and political clout, more and more of the shape of our societies and institutions. We want to reverse this trend and we want to see dignity, participation, and status connected to more than one's value "on market" in terms of wealth.

The best work in digital media and learning is not, sadly, produced thus far by academics or business people. It is produced by "everyday" people engaged in what people have variously called "interest-driven communities," "communities of learners," "passionate affinity spaces," or "communities of practice" on the Internet where people of different ages and abilities come together to engage in shared endeavor. In these spaces, "amateurs" are producing things like digital media, news, ads, knowledge production, design, and new tools at a professional level without official "credentials." These spaces are well described in Clay Shirky's books *Here Comes Everybody* (2009) and *Cognitive Surplus* (2010). They are the subject of a book I wrote recently with my wife, Elisabeth Hayes, called *Woman and Gaming: The Sims and 21st Century Learning* (2010). In that book, we discuss how the best of these communities or spaces are organized to create learning, mentoring, and creativity.

Part of your argument about studying literacy—whether we're discussing traditional print culture or digital literacies—is that literacy is not necessarily a positive or negative value. That is, unlike policymakers who insist that literacy is an ability that always improves an individual's quality of life, you see literacy as a social and contextual function with no inherent morality inscribed upon it. In your book New Digital Media and Learning as an Emerging Area and 'Worked Examples' as One Way Forward (2010)*, you suggest that instead of getting mired in these debates about literacy's moral status, scholars should think about the "affordances" of literacy, which you define as "the effects it tends to have, all things being equal, in different contexts." What are some of the "affordances" of literacy, as you see them?*

In another book I wrote with Elisabeth Hayes recently, called *Language and Learning in the Digital Age* (2011), we take up this issue of the affordances of traditional print literacy and new digital tools. When we say a technology (like print, video games, television, and so forth) have affordances, we mean that they tend to have certain effects, not that they actually will. It all depends on context. One affordance of print literacy was for building institutions. Print allows language to travel far and wide and allows large groups of people within institutional structures to be coordinated. However, literacy cannot help create stable institutions unless there is a large amount of trust in a society, trust in things like law and contracts. Even today when societies are low in such trust, their institutions are weak. Such trust is not created by literacy, but by other sorts of social, historical, and cultural factors. But such trust (a form of "social capital") is required for one affordance of literacy—namely complex institutions—to be realized. Such institutions have, of course, been a mixed bag in history. They have done much good and much harm.

Digital media have as one of their affordances the disruption of institutions. People can use digital and social media to organize themselves for certain endeavors without needing a formal institution to create and sustain that organization. Historically, institutions came to exist because there was no other good way to organize large groups of people. But now there are other ways, ways underpinned by fast digital media and not a slow medium like print. People can engage in joint design work on the Internet or organize a revolution via social media. Organization can arise quickly and disappear quickly.

One other affordance of digital media is for customizing and adapting what we hear and experience to our own individual interests, tastes, values, and political views. We can each live in our own "bubble" with people who see the world as we do. We can cease to experience things that challenge and unsettle us. We can cease to interact with people who are quite different from us. This affordance requires (and then increases) a deterioration of the public sphere, that is, the space in which people feel commitment to others as fellow citizens and not because of shared class backgrounds or shared ideologies in any narrow sense. Such a deterioration of the public sphere has been readily apparent in the United States for some years now. We are a polarized society, with little feeling of shared commitment to others who are not like us. Wealth is pooling among a very small number of people in ways that have not been truly seen since the 1890's, the Age of the Robber Barons. Digital and social media did not cause this deterioration, but they can accelerate it. At the same time, digital media also have an opposite affordance for integrating diverse peoples and groups to work on important causes common to people and, indeed, the globe as a whole. In a way we face a choice about which affordance to support: customized bubbles or common causes in the creation of a renewed public sphere, even at the global level.

Your work tends to takes place at the interstices of established disciplines. Similarly, your interest in video games is on the periphery of what people tend to think of as standard academic fare. Why is inter- or cross-disciplinary or even non-disciplinary work of particular interest to you? Do you think we need a structural revolution in institutions of higher learning—a shift away from disciplinary thinking?

Institutions of higher learning are moribund institutions. Many will die or be transformed beyond recognition. Colleges and universities are expensive, they operate largely in market terms to make money (since states will no longer really support public colleges and universities), and the majority of their students are not there to learn, but, rather, to socialize and get a credential that they hope and believe will get them a job. Colleges teach their students in ways that many of them no longer respond to. They teach the way professors learned (via monologues and text) and not the way many young people today want to learn, via digital media and collaboration with others in a social space. Highly prestigious institutions like Harvard will stay in business no matter what—they could waterboard their students and still have tons of applicants. But other institutions that do not have such status

to offer will have to compete for students (especially those who can pay) by offering something students want. If this is not something deep, that reinvigorates the human desires to learn, achieve mastery, and participate in society, then it will just be cold beer and warm bodies (the only reason e-learning has not eradicated most campuses).

Many colleges today have adopted the rhetoric of "college is for getting a job." In a developed country, three-fifths of all jobs are service work, now often poorly paid and with no union. So, talk of college as job preparation is disastrous. A great many college graduates are not going to get high-status, high-paying jobs. In developed countries, many people are going to have gain status and a sense of worth "off market" in their lives outside of work. They can do so by participating in interest- or passion-driven learning communities of all sorts and by helping to reinvigorate a public sphere that is now dominated by markets and wealth. To do this, they will need an education that helps them to be able to understand a world full of change and complexity, to be able to collaborate with others unlike themselves, and to be able to tell when politicians, media, and ideologues are seeking to manipulate them. Such an education is hard to find today.

I have always worked at the borders of different fields. Even in my "first life" as a theoretical linguist, I worked on the border of syntactic theory and the philosophy of language. This is just how my mind and interests work. However, today, I believe that narrow disciplinary experts are dangerous. We live in a high-risk world full of interacting complex systems like the global economy, global warming, environmental degradation, over population, vast worldwide poverty, health epidemics, and civilization/cultural/religious conflicts. The problems these systems give rise to—many of them caused by humans in the first place—cannot be understood or dealt with without pooling knowledge and tools from many different areas and people, including people without official "credentials" (as in crowd sourcing and wisdom of the crowd phenomena). When the worldwide 2008 economic collapse happened, Alan Greenspan, one of the leading economic experts in the world, and a man who had virtually run the U.S. economy for years, said he never saw it coming and would never have thought it would happen. Such experts are now dangerous people.

You've argued that learning must be material, situated, and intuitive—which suggests that it also must be embodied. What is the role of the body in education? Is there an irony here—that studying digital and virtual media, where the limitations of the physical self are at least partially transcended, leads you to an interest in embodied learning?

Ironically, video games are an embodied form of learning. Human brains are made in such a way that we humans feel embodied control over just the area around our bodies which we can manipulate in a fine-grained way. This space has been for almost all our time on earth, about two feet around our bodies. This space extends for blind people to the end of their cane, since they can manipulate the world in a fine-grained way with their cane, and it becomes an extension of their body. Digital media can fool humans. If I use a web cam to manipulate a watering can to water plants far away in another country, I get the uncanny feeling that my body has extended all the way to that far away space. In human evolution, never before could humans finely control things that were not next to them. Thus, when a gamer manipulates an avatar, for example, and can cause fine-grained movements and actions on the part of that avatar, the gamer feels as if his or her body has extended into the virtual world and melded with the avatar's body. The avatar becomes a surrogate body. This is why when young children play *Mario*, for example, and push the "jump" button they often jump out of their chair. Furthermore, the human mind has lots of "mirror neurons" that allow us to mirror movements and actions we see "as if" we were doing them. So one power of games is the ability to recruit embodied learning.

Situated embodied learning, for me, means being able to understand language (or some other representational system) in terms of having lived in and experienced in an embodied way the world the language is about or applies to. When you play a video game, the game associates images, actions, experiences, and dialogue with each word or phrase in its game manual or in text about the game on the Internet. That is why it is smart to read the manual after having played the game awhile, not before. If you don't, then the manual has only what I call "verbal meaning." You can only associate definitions (words) with the words and phrases in the text (you substitute words for words) and not images, actions, experiences, and dialogue. Disciplines like chemistry or biology are themselves "games." They are made up of problems to solve, tools to solve them, and ways to go about "winning the game." A

chemistry textbook not backed up by images, actions, experiences, and dialogue from this game, is like a game manual with no game. At the least, it is a bore. At worst, it is meaningless gibberish.

In What Video Games Have to Teach Us About Learning and Literacy (2008)*, you argue that video games use more effective and more engaging learning strategies than those that students are likely to encounter in school. For example, video games immerse players in challenging new worlds of which they are then motivated to learn the guiding principles, while textbooks provide students with decontextualized information that exists outside of perceived social use. Throughout the book, you give examples of ways that teachers can and have used some of the same principles as video games designers to provide more effective learning conditions. Can you briefly describe some of the strategies these effective teachers share with video games designers?*

I view game design and learning design as very similar enterprises. Teachers—when they are professionals—are designers of learning. Games teach through design; design in a game resources learners. Good teachers do the same and will do so more in the future as learning even in school becomes more problem focused, collaborative, and focused on creativity. Good games and good teachers do the following: 1) they focus on problem solving, not facts, formulas, and information on their own, but rather as tools for problem solving; 2) they create motivation for learning based on choices players/students make and identities they want; 3) they ensure that all players/students have had the necessary background experiences to have an equal opportunity to learn; 4) they encourage performance before competence, that is, learning by well-supported and well-mentored activity in which players/students can learn by doing; 5) they ensure that the cost of failure is low enough to encourage exploration and risk taking; 6) they ensure that all players/students have early motivating successes; 7) they give information, words, and texts "just in time" (when players/students can immediately put them to use in action and problem solving) or "on demand" (when players/students have asked for them or are ready for them); 8) they encourage players/students to see failure as a form of learning and to persist past failure; 9) they encourage players/students to practice skills within meaningful activities until they are mastered and then to challenge those skills by facing problems where these skills do not work as well, so they can ratchet their skill level up and up; 10) they order problems so that

early problems encourage solutions which are generative for working on later, harder problems; 11) they encourage players/students to think like designers and to "mod" (modify) and improve on the game or curriculum; 12) they enable players/students to enter interest-driven learning communities where they can take their learning further with others; 13) they focus on preparation for future learning and the creation of good learners, as well as growth across time, not on how fast one learns or how many facts one retains at any one time.

I've noticed that most of the examples of effective teaching you give in What Video Games Have to Teach Us (2008) *come from the elementary science classroom. Why is that? Are there similar examples that can be drawn from other fields or other levels? How can the lessons of video game design help us to be better teachers of, say, college-level writing classes?*

The examples in *What Video Games Have to Teach Us* (2008) come from elementary science because at the time (and still now to an extent) the government and funders were heavily focused on STEM due to our economic competition with places like China and India and the supposedly poor results U.S. kids achieve on international tests in science and math. But the principles are general and apply to any area and any level. I have listed some of them above. In fact, for me, the sweet spot today is in integrating art and science, which now often use the same digital tools, for discovery in the service of solving global problems and reinventing the public sphere nationally and globally. Until we trashed our schools thoroughly with the No Child Left Behind policies, kindergarten was the best part of school. It worked best because it was the level most based on the principles above. Graduate school used to be that way, as well. But now "accountability" to fact-based tests is driving out any real learning. Colleges, as I said above, are broken. They face the choice either to become an extension of high school or a job training agency, on the one hand, or to reinvent themselves to do for "higher" education what games have done for learning and innovation.

One of the things you noticed about video game players, including yourself, is that when their character dies —when they fail—they tend to keep right on playing. Somehow, failure motivates them to keep trying, and to try new approaches. On the other hand, students who fail in school often become discouraged and

disinclined to expend energy on learning. This probably sounds familiar to most teachers. So many of my composition students arrive in college with a sense that they are inherently bad writers. How can teachers do what you call the "repair work" that will allow these students to become motivated again? (Gee 2008, p.57).

Hard to know how teachers can do "repair work" (remedy the damage schooling has done to so many people) given the schools as they are today. We need a new paradigm. We need to get rid of time as a measure of learning. People start at different places and take different routes to mastery. They arrive at the "end" of a stage of their learning journey at different times. We need to lower the cost of failure so as to encourage exploration, risk taking, and trying new learning styles. We need to place students in interest-driven learning communities where they actively mentor each other and set norms for excellence among themselves. We need to realize that to master anything deep (like writing) takes thousands of hours of practice and persistence past failure. No one puts in these hours and puts up with failure unless they have a passion for what they are doing, and so we need to learn how to kindle and inflame passions for learning and mastery. And we need to see that telling people that college is about getting a job is a disaster. It should be about getting a life where one feels worth, dignity, and agency and can challenge the idea that you are what you earn. We Americans live now in Kingdom of Short Term Greed. Truly educated students would knock the walls down.

You describe what you call the "delicious" feeling of entering a virtual world in a video game and becoming lost in a new situation that you have to learn from the ground up. You say that this is not unlike the feeling of a researcher pursuing a new topic—or even just an ordinary person going through some life changes. However, I've often noticed that my students tend to pathologize the confusion they encounter in the classroom. For them, being uncertain about what's going on is less "delicious" than it is a sign that something is wrong —or, worse, that they are doing something wrong. Smart people don't get confused, I guess. How does their schooling teach students to think this way, and how can teachers un-teach that?

Those same students, though, may find confusion and frustration in a game motivating. They may well persist past the confusion and frustration. Schools have given people a terrible view of what intelligence and learning are. Intelligence is something only a few people have because they were born smart. They are a few winners and lots of losers.

Good learners move as fast and efficiently to their goals as possible and master a lot of facts, formulas, and information that they can recite or write down. They are all very stupid views. They are immoral as well. Human learning is U-Shaped. People get good at something, then worse at it, and then better than they were before. They master certain things, practice them until they have routine mastery, and then they seek a challenge that calls that mastery into question. They enter a time of confusion as they reorganize their knowledge and skills to get ready for a jump up the skill tree. They may look worse, but they are in the deepest part of learning. However, at this point school fails them. After they have reorganized their knowledge and skills, they eventually achieve a new, higher level of routine mastery through more practice. Then they start the cycle again, seeking a new challenge. True learners and real experts seek such challenges all their lives and are still seeking them 20 minutes after death. Routine mastery, resting on one's laurels, always looking good and seeming smart in the absence of real growth is a form of death in life. It is the form of death in life our schools often encourage even for "good students."

I've asked a lot of question about how individual teachers can work against systems and traditions that emphasize evaluation over learning and seem to punish uncertainty. However, maybe my "what-can-I-do?" approach is too small. Are you suggesting a radical overhaul of the education system? What would your ideal learning environment look like? Would it even be a school? Would there be classrooms? Grades? Teachers? Should we just burn it all down and start over?

Yes. Burn it down. I want a new paradigm. And a new paradigm is growing in some cases out of school as young people organize themselves in "passionate affinity spaces" to learn, gain mastery, produce, participate, mentor each other, and innovate, even in competition with so-called "experts." Affinity spaces are sites, often but not always on the Internet, where people organize around a common endeavor (and not shared identities based on things like talent, class, or race) and a shared passion to learn and produce based on high internal norms they have set for themselves. At their best, such sites are not age-graded (young and old are there alike) and newbies and experts are present there together. Leadership and mentorship is flexible. People, young or old, sometimes lead and sometimes follow. They sometimes mentor and they sometimes get mentored. Such spaces kindle interest into passion and allow for different styles of learning and participation. They resource learners with smart

tools, and they set up good collaborative learning and problem solving. They involve intense socialization, but always subordinate socialization to the shared endeavor, passion, and norms.

Elisabeth Hayes and I discuss such new forms of passion-based teaching and learning in our books *Women and Gamers: The Sims and 21st Century Skills* (2010) and *Language and Learning in the Digital Age* (2011). Teachers will by no means go away. They will become designers of learning and affinity spaces to create passionate, collaborative global citizens ready to face the immense perils that Baby Boomers and financial elites have created for all of us. They will or we will go extinct as a species amidst the mess we have created in our haste, greed, and disdain for "everyday people."

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