

## **Informal Learning and the Role of Emerging Social Technologies**

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*When I talk about informal learning, I mean learning that is not directed or controlled by any formal institution or central body other than the individual alone. This resembles learner-centered learning, but more specifically, there is no one there to say what to do. It is solely driven by individual activity involving the pursuit of understanding without externally imposed curriculum. In that sense, there cannot be anything like informal training in the context of informal learning, because it embodies the assumption of the presence of an instructor. It may be argued that informal learning is not even related to education, which derives from the Latin verb educere meaning “to lead forth”, characterized by the presence of a more knowledgeable teacher leading the learners. The paradox of informal learning is: the moment you start to define or try to support it, you will start to formalize it, accidentally turning it into formal learning. This same logic is apparent when we recognize that social technologies are more suitable as learners tools rather than teachers tools.*

Further confusion is provided by business organizations and EU politicians suddenly emphasizing the need to support informal learning<sup>[1]</sup>. Conceptually it's quite suicidal to say we want to support or even capitalize on informal learning, because it means getting rid of the structures we have build for formal education. Having said that, loosening the rigid formal structures of our current system is the least we can do if we want our kids to survive in the globally networked competitive marketplace of the future. Getting rid of all the structures is not an answer either, but rather blurring and blending the lines between informal and formal settings are required. To foster informal learning we have to give up control, not tighten it.

Defining informal learning is impossible. It always depends of the context and point of view. In a study by Helen Colley et al., they came to a conclusion that boundaries between formal, non-formal and informal learning can only be meaningfully drawn in relation to particular contexts, and for particular purposes<sup>[2]</sup>. My context has been to look where formal education fails to deliver and where emerging social technologies intersect.

Surprisingly, I've found out that there are increasingly more opportunities for curious individuals to circumvent intermediaries like teachers and educational institutions to learn effectively. This diverse space of social interaction technologies are becoming wide-spread and not controlled by any formal institution, but rather by learners themselves. This means there are situations where formal educational structures of the past are not meeting the needs of learners today, in other words they are not intersecting at all.

I'm not arguing that teachers are not needed, what I mean is that we don't necessarily need the formal agreement between a certain learner and a certain

teacher to enter in a teaching and learning relationship. Increasingly learners will take an advantage of teachers, just like parasites who supply themselves without the knowledge of their host. This trend of learner-teacher relationship reversing from the teacher push to learner pull is largely driven by social communication technologies that enable people to find each other, connect, interact and leave without any formal means. Meeting of minds, rather than bodies.

As an example, on the social video sharing site YouTube, a web band called ClipBandits<sup>[3]</sup> was formed by three individuals without any formal consensus. Two members just jammed over each other's video recordings and the final video included a third-party who jammed on top of the two others, showing the two other clips running on the background. Suddenly even I can participate in their band as a drummer, even though I don't know these people. All we have is a shared object of interest to connect. Given the available distribution mechanics provided by peer-to-peer networks and free web services, this iteratively formed band doesn't even need a record label to get an audience for the content. Metaphorically, informal learning can be contrasted to being a drummer in a band that doesn't necessarily know or agree that you are part of the band.

Similarly, teacher and learner relationships will form emergently without shared consensus. This is informal learning, forming and being formed through informal means. No boundaries, agreements or shared objectives. Just individual needs, curiosity, shared objects and technology-supported social networks for individuals to connect to each other.

People can train you but they can't learn you. What is wrong with our educational system is not in the details but something that is fundamental. Learning existed already before teaching. The U.S. Department of Labor reports that informal learning accounts for 70% of the learning that employees do on the job<sup>[4]</sup>. Jay Cross concludes that only 20% of resources in organizations are put into informal learning, while 80% of learning happens informally<sup>[5]</sup>. Several others have provided similar figures. Most educational literature is focused on providing or researching formal pedagogical frameworks of education, rather than figuring out how people are learning informally. There is a serious imbalance between resource allocation and pursued results.

Seymour Papert simplifies that there are three stages in the relationship between the individual and the knowledge during ones lifetime<sup>[6]</sup>.

Stage one happens when a baby is born and starts a process of individual learning driven by exploration. Soon the limitations of this exploration requires finding adults who will tell things the child is unable to experiment with. In stage two, the child enters school, where experiential learning is gradually replaced by learning by being told. The trauma is to stop learning and accept being taught. Those who survive this strangling intellectual torture enter stage three that involves deschooling, learning to learn, experiencing and learning to be creative, effectively returning to stage one. Deschooling is a term used to

describe what it takes to get your child back after she has been institutionalized. Going back to stage one is in the heart of life-long learning.

Papert suggests that the stages are now changing along with the empowerment computers are capable of providing to children in the zone of proximal development (Vygotsky, 1978<sup>[7]</sup>). Social technologies enable people to reach out for information, knowledge and people they are unable experiment directly with offline, surpassing any intermediaries like schools, postmans, travel agencies and media outlets to get there. Web is becoming the greatest converger of human beings.

We're seeing signs of the weakening of our educational system modeled after the industrial hierarchies. Formal education exploded in importance as we moved into the industrial age but now the tides are turning. Workers are dropping out of organizations and learners are dropping out of schools to become self-directed, self-employed and self-educated free agents floating in the sea of knowledge, surrounded by networks consisting of denser structures for sense-making. I know what I'm talking about, because I'm one of them having spent 1/3 of my life before the age of 25 being an entrepreneur and learning on the web to solve complex technological and social problems for my customers.

There is nowadays less need for clearly defined jobs. Peter Drucker described that knowledge workers know more than their bosses on how to do their jobs and it's only a question of time until they don't need a boss at all<sup>[8]</sup>. Even more importantly, they know how to distribute and connect the sort of knowledge they are not actively pursuing but which is required to draw complex conclusions when needed. Knowing how to get the answers you need is more important than trying to remember those answers. As George Siemens describes in his theory of connectivism, we distribute our knowledge on a network of people and non-human appliances through a process of network formation<sup>[9]</sup>.

Our educational system has successfully utilized the military-based ADDIE (Analysis, Design, Development, Implementation, Evaluation) or SDI (Systematic Design of Instruction) models<sup>[10]</sup> for decades, but it no longer meets the needs of the network society nor knowledge workers who work in complex and constantly shifting environments. In fields where knowledge is ever-changing and the future is highly unpredictable, providing vessels with descriptions of the past is the wrong tool for the times. The new era requires the opportunity for unpredictable network formation that informal learning accompanied with social technologies can bring to constantly shifting contexts.

It's no surprise that the conversation on the web regarding informal learning often identifies less structured tools like podcasts, wikis, blogs and other social software (including Flickr, Youtube, del.icio.us, Furl etc.) as vehicles for informal learning, leaving Learning Management Systems out in the cold as too structured and rigid for the purposes of self-directed learners. The central activity in traditional educational technologies is centralization, control and content instead of decentralization, interaction and network formation.

PLE (Personal Learning Environment<sup>[11]</sup>) is a design approach to interconnect a wide variety of current and future technologies for personal learning rather than being a single strictly defined technology. The idea of a modular learner-controlled system for personal online learning better fits the needs of self-directed learning occurring in complex, networked and adaptive environments. Think of organic evolving life-forms that circumvent rigid structures, instead of walls and hierarchies. In contrast, LMS often provides a very homogenous experience of every learner having the same tools and same content organized in the same fashion, rather than encouraging diversity in approaches, methods and tools.

Informal learning is often identified under the desire for lifelong learning. PLEs are more suitable to achieve this goal than any institution-controlled learning technology can ever be. PLEs are not controlled by institutions, in other words when graduates carry on with their lives, the learning environment along with the user-generated content and network relationships follow and remain in the control of each individual.

Other significant part where formal education falls short is today's requirement to satisfy generation N<sup>[12]</sup>. In nature, generation N operates in a multi-dimensional polychronic (many things at one time) learning environment, instead of a sequentially linear monochronic (one thing at a time) learning environment. The differences are characterized in Table 1.

<b>Monochronic Learning</b>	<b>Polychronic Learning</b>
One thing at a time	Multiple things at once
Adhere to plans	Adapt to environment
Linearity	Multi-dimensionality
Commitment to task	Commitment to relationships
Beind Lead	Being autonomous
Repetition and memorization	Problem solving and creativity
Homogenic	Heterogenic
Seeking one right way	Acknowledging multiple paths
Out of context	Highly contextual
Designed approach	Emergent approach
Synchronous communication	Asynchronous communication
VLE/LMS	Social Software/PLE
Information technology	Interaction technology
Selecting tools based on design	Selecting tools based on process
Motivation through rewards	Motivation through challenges and new relationships

*Table 1: Polychronic and Monochronic Learning*

Consider Stephen, a millennial who writes blog posts in a highly interlinked environment, records podcasts, posts videos on Youtube, chats asynchronously with his friends in IM (Instant Messaging), searches on Google, coordinates forty of his friends in a raid on a MMORPG (Massive Multiplayer Online Role Playing Game), checks an IRC channel once in a while and glances at his Myspace profile for new activity while speaking on the phone, all of this at the same time. Now imagine Stephen being thrown into a static linear curriculum-driven Learning Management System with passive learning objects and top-down metadata. That is a serious understatement of the attention-span, skills, resources and tools available to Stephen.

There is a fallacy though in believing that personal learning is just personal. Defining a blog is as difficult as defining informal learning. Mass-media tends to describe it as an online diary and educators could describe it as a learning diary, but framing a blog in the notion of diaries disconnects it from its true meaning of being interconnected in a semantic social network<sup>[13]</sup>, rather than being simply just personal. The moment you start to structure and draw a future purpose or a reason for any kind of social software to exist for education you start to make it less like social software, the same way you turn informal learning into formal just by trying to design and narrate it beforehand.

Social software is like a mobile phone: you don't specifically define its purpose in human communication. It would be ridiculous to define that a phone is used to call only certain type of calls, in certain type of patterns to certain people. A mobile phone is a communication device where context and different parties define how it's used. Similarly, social software is the central hub for conversation, meaning making, learning and knowledge creation. Its beauty comes from the fact that letting it grow organically like an ecosystem, it will lead to uses the original designers newer thought of.

*„Now there is one outstandingly important fact regarding Spaceship Earth, and that is that no instruction book came with it“*  
– Buckminster Fuller

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