Positing a Theoretical Framework for Learning and Design With LOGO

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Abstract

After working for eight years on technical design in the computer learning environment Ebey, the Director of Pacific Research found herself at cross purposes in skill building. The in-depth issues related to coordinating pre-prototype design and learning methodology ushered in concerns both with innovation and good thinking. Combining self discovery and confidence building in the business and industry standards arena with programming language and new design concepts presented a challenge. Reflecting on the difficulty of her own process in the midst of cultural crisis and stringent militant guidelines posited the need to cultivate a perspective on education drawing on her work with LOGO.

Keywords

Blended learning, revolutionary, rubric, sustainability

1. Introduction

Ebey's background working with LOGO has been significant to her thinking both as an effective and fun resource for visualizing space and creating dimension in her understanding of computational modeling. Past collaborative research with speech recognition for the severely disabled led to early laptop research and design. Having been raised and inspired by the legendary leaders of the black box revolution in Silicon Valley, California, USA, spawning the individualized computer from the mainframe she struggled, pondering the need to 'break out of the box' in learning. Terrified by political schism based in fear of losing the vote through computer fraud she wondered "what she could do in education?"

How do you in good conscience cultivate education and the spirit to raise youth in your own country and respond to international crisis when the Executive Branch of government reinforced by computerized nuclear weaponry separates the people's voice which is supposed to be represented by Congress and the vote?1 It's an overwhelming question punctuated by a satanic double negative. Using computers for peace and building upon student-centered curriculum based in a locus of control of sustainability and happiness is key and diametrically opposed to any show of hard power. This apparent deadlock afflicting Western civilization is seeking healing through an ethical dimension different from the centrality of rationality and logos toward an ocean of humanistic dialog.2

2. Engaging Research

Deeply concerned and determined to continue to be self-motivated Ebey sought to identify issues that were relevant in her own life and research with her sense of responsibility to humanistic dialog as a teacher. Believing that sincere experiential exchange in the process she was going through working in the field was important to substantiating further goals she sought engaged research that was significant to the community where she currently lives and to blended learning in the larger international community. Given the imperative that she needed to pass certain academic tests to be able to teach on the elementary and secondary level she sought additionally to verify her background with good, sound reasoning motivating her ongoing research. This helped her bridge the gap of being considered over qualified with having to work in regressive retrograde to be accepted into any of numerous educational environments.

Her ongoing dialog with colleague, Rick Walker from the AHA! Learning Center3 has been exciting from an intellectual and emotional standpoint. In part because she does not share his capability with programming language her opportunity to learn by doing and sharing ideas and spatial concepts has been influenced by the revolutionary LOGO learning environment and by her mentor, Daisaku Ikeda4. She wanted to build a better desktop workspace for learning and at the same time cultivate tools of engagement for the learner.

2.1. Technical Design Issues

Both as part of organizing manufacturing and business and interacting with the field in terms of video electronics standards she felt compelled to challenge opportunity for young learners while addressing in depth problems related to innovation.5 These may seem like disparate areas of research and in a sense they are but timing the engaged process shared some creative similarities.

If imagining a concept is like turning the light on inside a cloud or seeing a rainbow beside a bubble then conceptualizing the steps of organized thinking for manufacturing and paralleling modeling for young learners through play can actually go together. Imagine if you will that architecting design is predicated on certain rubrics called industry standards. The jargon goes something like (set A), (set B) and (set C) are unknown but the systems architecture is based in such and such standards. Like the turtle which is instructed to go from point A to point B and then on to Point C at such and such a rate the laws of physics tickle the researcher to anticipate electronic signaling based in physical properties, melding together a variety of functional elements through electronics programming. The intricacy and complexity of connectivity becomes a compelling standard by which new innovation is created.

2.2. The Turtle as Social Revolutionary

The turtle sprite then embodies the generation of the design idea from the programmer's standpoint. As a building block the learner needs to embrace academic standards morally while comparing the outcomes from what has gone before based in the technical standards of the industry and avoid becoming a pundit or icon. This is where innovation in design comes into the process and making new ideas a part of the field of technology research refreshed through product implementation.

For the young learner it is like having the sprite as a friend and envisioning movement and dexterity both physically and mentally traveling into space. At least this is hopeful thinking and a good framework for motivation in learning and any turtle undertaking. It is a means of creating an integrated environment using LOGO both as an approach to learning using mathetic principles and also of being taught in a friendly way, not monitored and reinforced into a hierarchy of obey on command. Turtle freedom!
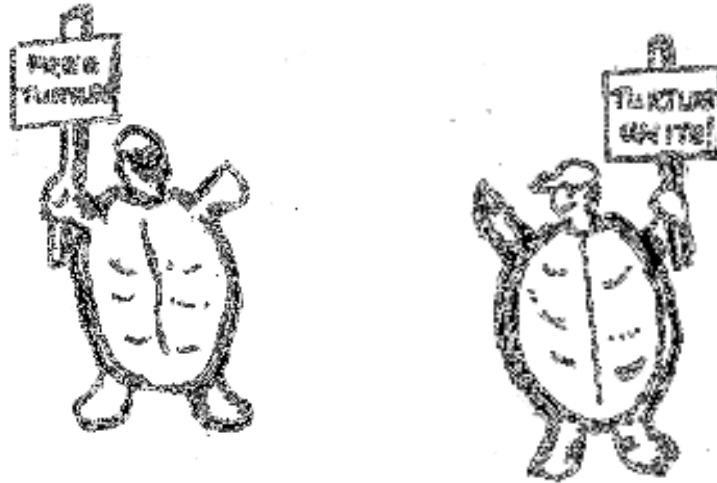

Figure 1. Turtle Freedom

3. Educational motivation

Inspired by the revolutionary educational theory of Dr. Papert, Ebey's greatest concern in education is to empower the learner from any age group to feel confident based on his or her experience and to draw on logic that is appropriate to being happy and personally engaged.6 From her observation there is a discrepancy in what she sees goes on in integrating cultural and linguistic differences and communicating academic skill. What is important here is building without disintegrating the integrity of the student and his or her sense of community and conventional wisdom. Engaging the turtle sprite as a means of skill building for children in terms of measuring and moving through space and modeling new direction is important as a tool for inner integration and expressing concerns with methods as well as academics. Working philosophically strengthens skill building.

3.1. Imagining a Turtle Initiative

Let's start with an example by building a square with a turtle sprite learning geometry and turning 90 degrees at each corner. Then delicately rotate the sprite at 90 degrees into space away from the viewer. Build the square into space imagining similar lengths of each side so that the sprite has now created a block. Now turn the sprite again and balance the whole object on the turtle's back for a moment to rest. The little sprite is in the middle of a huge undertaking and as yet undecided about whether to create a new path or carry the block on it's back disappearing into the environment.

Comparing the ability to effectively begin and close interaction based in what he or she feels, thinks, sees or wants to know is allowing the opportunity for a child to engage and be respected for personal boundaries in different ways. For a child this kind of reinforced opportunity to verify experience and not have to match with others is like the sprite deciding about it's next direction. This is a movement oriented approach to learning math and science

through spatial understanding combined with a philosophical opportunity to distinguish differences.
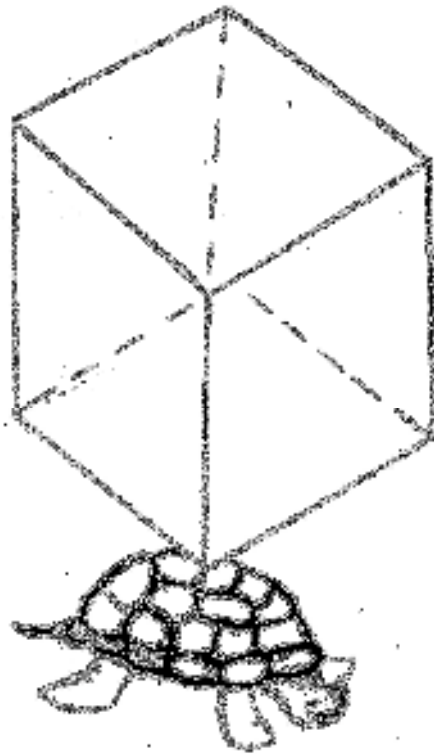

Figure 2. Sustainable Education

4. Moving a Rubric and Trying to Make It Fun

If you imagine the sprite as an animated image integrating design specs with programming concerns embodying the physical properties of electronics then a comparison with moving the sprite from A to B leaves you open to some concern. It might be better here to have a team of sprites in collaboration traversing a sonorous pathway of intriguing possibility for electronic engagement and transference of great computational accuracy. Actually writing the code becomes a combination of drawing on industry standards and inventing some of your own based on the product design goal.

4.1. Musical Affinity in Turtle Health

At this point my colleague Rick and I might digress to discuss music as a means of imagining different approaches to the organization of sound based on an Eastern and a Western model isn't too farfetched because of the relationship to signaling in electronics. He has impressed upon me that Eastern music is much more concerned with the melody line than Western which seeks vertical harmonies into distraction. We have posited numerous points related to how combining disparate skills and capability can converge into a combined vision.

Unfortunately this can be extremely difficult. Like the sprite's temporary repose nothing lasts forever.

Particle physics teaches us that at the subatomic level we cannot speak of fixed or solid matter but only of constantly shifting energy patterns or waves. The world of quantum mechanics is so unstable and elusive that no matter how hard they try, physicists find it difficult to pin down the primary building blocks.6 So imagining the sprite as only a reflection of various elements establishes a healthy framework for integrating standards and manifesting functional components in the struggle to write programming language for new design. Like finding a song unsung and singing a beautiful lyric line the programming elements are integrate into a LOGO inspired topographical map, protecting the rights of the children for a safe, sustainable global learning environment in the future.

Of course this is a simplification based on a desire to engage with forethought in a nonculpable way given the immoral and illegal Western race for dominance. Faced with the choice between education or crisis in the world of learning it is a moral responsibility to be creative with design and in earnest in making a contribution for the children of the future. LOGO sustains a visual and spatial understanding of math and physics which is condusive to computer language and design. Following a lyric line lifts the palette abit to the world of imagination independent of logos based on any empirical rationalism of domination. It is logos in a new key borrowing hopefully from the thought of a more vibrant hue and concerted collective effort.

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