

Fashioning the Future Educational Technology: An Invitation

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INTRODUCTION

It is the intent of this paper to establish the next stepping stone toward fashioning the future educational technology. An outline of the long-standing inherent, unifying theory of educational technology and its past, present and future manifestations will be shared, followed by a discussion of the implications of a future-based theory for educational technology practice. Highlighted here will be a suggested shift of empowerment within educational technology. Finally, a beginning profile of desired learner outcomes of the future educational technology will be presented as a springboard for discussion and reader involvement in the further fashioning of our future. In short, this will be a proactive rather than reactive piece.

THE THEORY OF EDUCATIONAL TECHNOLOGY

If there is some future of educational technology that is dead, it is not ours. Our future has been alive and well in the minds and words of our visionaries for a long time. The vision of the future educational technology, in terms of goals, has remained constant over the years, for it is based upon the unwritten, implicit, unifying theory of educational technology.

Yes, there is a unifying theory of educational technology. There cannot be a believed-in, viable vision without a supportive theory. Every educational technologist who has embraced our field as the way to positive change, every educational technologist who has been frustrated with our slow progress toward the ideal, every educational technologist who has been committed to the improvement of learning has shared this vision and its theory.

Simply stated (I will be fleshing this out for a future article), the principles of the theory of the future educational technology are these:

- a) individuals are capable of learning, learning how to learn, and learning how to control the learning process;
- b) all individuals are capable of becoming motivated;
- c) individuals are capable of moving from poor or non-performance to excellent performance;
- d) successive generations of individuals will be able to perform at higher and higher levels of excellence.
- e) an individual who has learned, learned how to learn, or learned

- how to control the learning process has done so as a result of interactions within and/or between self and environment;
- f) communication of clearly envisioned desired performance facilitates performance attainment and evaluation; and
 - g) environments can be structured, in a systemic fashion, to effect successful learning and motivation.

These principles suggest a causal-deterministic theory, if the conditions are structured appropriately, any desired learning is possible. Providing explanations for what could be, our future-based theory has remained constant throughout the evolution of educational technology. It has provided the rationale and motivation for everything we have done and continue to do and has fueled our attempts toward dream realization.

While the vision and theory have remained the same, the means during our evolutionary stages have changed. During the audio-visual stage of educational technology, such as multi-media learning environments, teaching machines and educational television were touted as the means to our visionary ends. Researchers and developers were intent on finding the "best" medium. In the current stage of educational technology the predominant means has become that of a systematic instructional design approach, one that incorporates the audio-visual component as but one variable within the instructional system. In keeping, researchers and developers now pursue multi-variate approaches rather than comparative, trial and error approaches. Today's futurist educational technologists envision yet another means - a systemic approach to developing learning environments and studying the learning process, ultimately effecting a means-ends entwining wherein the learner is the educational technologist.

IMPLICATIONS OF A FUTURE-BASED THEORY

Two aspects of the theory of educational technology give it strength, and the ability to embrace the future as we create it: a) our theory is primarily a set of proactive principles, a belief system to be effected; and b) our theory has the potential to empower any component of the educational technology system. Appropriate attention to these aspects can actualize the future educational technology and its desired outcomes.

Effecting the Belief System

Our future-based theory has major implications for how we should practice within the future educational technology. Rather than accept others' perceptions of desired learner outcomes, we must establish desired learner outcomes, we must concentrate on our desired ends rather than appropriate means for existing ends and existing constraints. Rather than try to predict what the future might bring so that we may be prepared, we must create the future; we

must adopt a proactive stance. Rather than monitor the systems of the status quo in order to correct them, we must create ideal systems. Rather than design learning environments to facilitate the passing on of what is “known,” we must design environments that facilitate the questioning of what is “known” and the creation of what is not known. Rather than foster learner dependence on the educational system, we must effect learner independence. Rather than assume that the societal suprasystems must be changed before those systems of interest to us can be changed, we must act within the awareness that a viable, newly formulated system will change its suprasystem. Rather than offer a legacy of accepted principles and practice, we must facilitate learner creation of new principles and practice; we must insist that learners go beyond our skills without taking on our baggage. Rather than concentrate on means, we must operate from our desired ends. Rather than hope that learners will someday be able to do what we can do, we must make it possible for learners to do what we can only dream of doing; we must pass on our dreams and the skills necessary to bring those dreams to realization. Rather than study the status quo and then design solutions for it, we must structure environments that will create ideal learners in spite of the status quo.

In order to create the future educational technology we must remove ourselves from the confining constraints of all that has gone before and all that is now. The vision of the desired outcomes of the future educational technology can be clear enough and enough coveted to be all we need. We should take care not to minimize or taint that vision with a redefinition based on experience, present conditions or what we imagine the future might hold.

Empowerment

Regardless of the means employed our visionary theory has remained a theory of empowerment for those who embrace it. Within each successive stage of our development a different component of the educational technology system is empowered. Whereas yesterday’s educational technology empowers the instructional design team, tomorrow’s educational technology will empower the learner. For the future educational technology to flourish, each and every learner must become an educational technologist, capable of transforming any environment into a fertile learning environment for meaningful and purposeful self-growth and fulfillment.

FROM IMPLICATIONS TO REALIZATION

Let us assume that a learner is empowered if able to think and perform in the manner of a master future educational technologist. Let us further assume that we can describe and measure such thinking and performing ability. Finally, let us assume that we can structure learning environments that would facilitate learning of such abilities. By keeping our sites clearly focused on the desired learner outcomes of the future educational technology we can begin to

describe the type of future educational technology needed. Then we can determine how to go about creating such a future educational technology. (How many times have you heard this sermon – for every field but our own?)

To define the desired outcomes of the future educational technology, i.e., the outcome of learner empowerment, we must be able and willing to show that educational technology is capable of objectively communicating the highest level of sophisticated, problem-solving learner performance. If we can clearly envision the desired future learner, we can clearly describe that learner's excellent performance. To illustrate, let me share with you my vision of the ideal, empowered learner of the future (the desired outcome of the future educational technology). For me, the empowered learner can:

- a) create plausible, alternative hypotheses to any current theory, explanation, principle;
- b) perceive all things from outside the accepted societal view;
- c) bear in mind that which needs to be understood;
- d) test own and others' conceptions/preconceptions;
- e) apply what has been borne in mind;
- f) distinguish system from asystem;
- g) create systems;
- h) communicate the systemic quality of a system;
- i) look within, as well as without, for answers/truth;
- j) see/analyze parts and whole simultaneously;
- k) design systemic wholes;
- l) implement and control systemic wholes;
- m) visualize ideals;
- n) maintain constant dissatisfaction with the status quo;
- o) create alternative pathways as needed;
- p) create new rules/principles, as needed for each new systemic creation;
- q) continuously transform self to next higher level on spiral (self-altering/enhanced regulatory capacity);
- r) act independently of others' conclusions;
- s) maintain lofty ideals;
- t) see all constraints as temporary, status quo baggage;
- u) define self in future terms;
- v) analyze and synthesize simultaneously;
- w) arrive at and share unique truths;
- x) look beyond the needs of self; and
- y) operate from the future.

Just as it took a lot of guts to move from the audio-visual approach to the systematic approach, it is going to take a lot of guts to move to the systemic approach, not to mention to the learner empowerment approach. My guts are on these pages. Your guts are needed. No one else is going to do it for us -not

our clients, not our superiors, not our employers, not the administrative leaders in our field. All it will take is for a handful of us to see it so clearly, want it so badly to make it happen.

AUTHOR

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