

Hidden Assumptions that Limit Foresight and Other Education

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Introduction

Asks noted futurist and educator Peter Bishop (2008), "The future hasn't happened yet, how can one teach it?" Other educators in foresight studies have likewise recognized the challenge of preparing learners for a future – indeed for possible alternative futures – that have not yet happened. In response to this challenge, various methodologies for "teaching the future," and for incorporating foresight perspectives into existing courses, are in use and are evolving, and this is an encouraging sign. Common to many of these methodologies is the use of exercises that teach participants to think beyond straight line extrapolation, indeed in terms of wild cards.

For their part, existing interdisciplinary studies provide an excellent foundation for future studies as they explore interrelationships that transcend single academic disciplines. Even so, the arts and the sciences maintain their own academic cultures and sub-cultures, and the notion of interdisciplinary studies itself is based on the premise of separate disciplines that is often taken for granted.

This is but one of numerous hidden assumptions that limit education itself, particularly efforts to "teach the future" – and herein lies the paradox. Foresight studies are becoming an imperative, both as an emerging area of study in its own right and as an integral part of existing diverse areas of knowledge, commonly known as disciplines. Inherent to foresight studies are discontinuous, nonlinear thinking and an ability to question hidden assumptions. But how can schools, colleges, and universities lead the way when their very foundations are themselves hidden assumptions that are rarely questioned?

Hidden Assumptions in Academia

In the World Future Society's 2008 Education Summit, Irene Brock's presentation identified a key underlying model and hidden assumption for many schools, colleges, and universities – the factory model (2008). Patterned after the same industrial-era factories for which they produced workers, factory model schools are mass focused, monolithic, "one-size-fits-all." Grade progression mirrors the assembly line, schools use extrinsic motivators and performance evaluation systems similar to those used in factories, and corporation departments have their counterparts in academic disciplines (Brock, 2008). Furthermore, in many educational institutions as in many factories, conformi-

ty is valued over creativity. Brock further noted that 90% of all mental tasks in schools are at the knowledge level (regurgitation of facts) and the comprehension level (understanding the concepts without necessarily being able to apply them, rarely extending to higher levels of thought complexity) (2008). Constrained by the factory model, educational institutions are focused on "the world that was" at the outset. For its part, the progressive education-to-career-to-retirement lifestyle, itself often taken for granted, also hints at the assembly line. In fairness, it is noted that the imprint of the factory model extends beyond education to include healthcare, judicial, and correctional systems in some parts of the world.

Another hidden assumption is the campus itself, which in turn leads to the mindset that measures that are good for educational institutions are good for education. Indeed, while one would think that recent state budget shortfalls would be a mandate for this distinction, this has generally not been the case.¹ Understandably, this differentiation can be difficult to make if the overarching objectives of "education" (i.e., whether learning is valued as an end unto itself or as utilitarian) are ill-defined, but this does not negate the limiting nature of taking the educational institution for granted.

There are additional hidden assumptions – the lecture hall, the knowledge worker, the relative importance of "left brain" vs. "right brain" skills, the present written and spoken word, and even the separation between educational institutions and other entities (communities, business, NGOs, and other prospective partners) – such separation itself arguably another vestige of the industrial era or at least reminiscent of it. However, unbeknownst to some, the remaining "shelf lives" of these hidden assumptions may be short indeed, and if educational institutions are to take the lead in "teaching the future," they will need to set the example by thinking beyond their own hidden constraining assumptions.

As one example, the confluence of spiraling college costs as a forcing function and IT and community colleges as enablers can be expected to impact college campuses – not necessarily making them extinct but possibly cutting into their enrollment and tuition base. Concurrently, the prospect of IT-enabled syndicated lectures across campuses can impact requirements for faculty and staff, with implications for faculty tenure. Another anticipated impact of the information age is to the knowledge worker (those professions that are presently based on extensive specialized knowledge). The resulting ripple effect will extend to education and training for these professions – specifically to their learning methodologies – and even the continuing relevance of these professions may be open to question.

For its part, the progressive education-career-retirement lifestyle is under assault by the explosion and short shelf life of some knowledge, the decreasing relevance of some professions and the anticipated advent of new ones, and the dwindling notion of a career-for-life, all in conjunction with increased longevity. As the career-for-life gives way to the need for continual education, a more cyclical pattern of education, career(s), and semi-retirement can be expected, with impact on the role of education (practical and relevant vs. an end unto itself) yet to be determined. Economic circumstances such as those of the past year can even call into question the assumed link between education and upward mobility.

While the proverbial jury may still be out on the lecture hall (and indeed the classroom itself), it is another institution that is often regarded as a given. In the near term, technology-enabled individualized learning may well encroach on this heretofore sacred cow, perhaps followed someday by advances in cognitive science and neuroscience.

Even if all of these hidden assumptions are identified and transcended, there lurks another that is commonly addressed only at the superficial level – the impact of culture on one's thinking and learning and indeed on one's sense of identity.

Culture-Based Hidden Assumptions – the Next Frontier

In the U.S., several universities have recognized the role that student ethnic diversity can play in enriching the overall educational experience. If educational enrichment is the objective, the resulting admissions policies, well-intentioned albeit controversial, do not go far enough. Whether students be from the ghetto or from the ranks of the privileged, and whatever ethnicities they represent, they bring hidden culture-based assumptions to the classroom. What true diversity among perspectives is really possible if most students are from backgrounds in which work is valued over family and leisure time, instant gratification rules the day, and "either-or" thinking, sometimes extending to a perceived need to take a stand on every issue, is pervasive?

As a more cyclical pattern of education, career(s), and semi-retirement takes root, one might expect increased sharing of perspectives across generations – for example, between those focused on vibrancy and opportunity, resulting in the extreme in "throwaway employees," and those more concerned with security and the social contract.² Students who return from the workforce, especially those who have worked in multiple professions, will enrich the learning environment for the younger students. However, even this does not eliminate the constraints of culture that students bring to the classroom. Even futurists sometimes fail to recognize the hidden culture-rooted assumptions that can limit foresight thinking. Helping students – the future by definition – identify and transcend such hidden culture-rooted assumptions (and notions of identity, so that they can "be all that they can be³") is where educational institutions can take the lead.

The next level of diversity in the classroom (or its successor) extends both to students steeped in the traditions of individualism and self-reliance and to those from family- and group-oriented cultures. It includes students who bring different experiences of work-family-leisure balance and different sources of identity (e.g., oneself, one's family or ethnicity, one's profession, one's community or country, one's political views or affiliations, or one's social network). One would find a mix of students who think primarily in reductionist and in some cases binary terms and those who think in more holistic terms in matters ranging from health and medicine to philosophy and even warfare. There would be more of a balance between "quarterly earnings statement" (instant gratification) and long planning horizon perspectives, perhaps between students who value introspection and those who value stimulation and diversion. One might even hope for an opportunity to learn from students representing Native traditions that view Nature as something with which to coexist – not as something to dominate – and who have nonmainstream perspectives on the future, indeed on time itself.

In a truly diverse learning environment, opportunities to question culture-based assumptions and to transcend limiting notions of identity would be magnified manifold. Students could ask one another about which professions are most highly valued in their respective nations, regions, or cultures – and indeed, who are their celebrities or "MVPs." They could ask one another whether cooperation or competition rule the day in their respective parts of the world, whether diversity is appreciated, how age and youth are viewed, what types of intelligence (including but extending beyond "right-brain" vs. "left-brain") are valued, whether life is relatively simple or complex, how they spend their leisure time, and whether outlooks on life in their parts of the world represent self-determination, fatalism, or something in between. They might even ask one another how they view learning – as an end unto itself or as preparation for a career. This is the next frontier in liberal education!

In addition to laying a foundation useful for identifying, questioning, and hopefully transcending hidden culture-rooted assumptions, true cultural diversity in the classroom has the additional prospective payoff of harmony, understanding, and peace as students learn to think beyond their cultural "event horizons" and not over-identify with a limited notion of personal identity in an "us-them" sense.

To be sure, the trans-cultural learning experience is more assured of success if each learning environment (such as today's classroom) is well balanced in the cultural perspectives that its students represent. A preponderance of one cultural background entails the risk that the other students in the class will be socially isolated and other perspectives marginalized, thereby defeating the purpose.

The role of IT in facilitating cross-cultural interaction is mixed. IT enables students in one country to participate in classes (and cultures) half a world away. At the same time, it often denies the student-to-student interaction (Kahn, Raman, Chan, Kahn, Marmer, Coniff, *et al.*, 2008). Such student-to-student interaction, accepted as an integral part of the contemporary and traditional learning experience, is the very foundation of the trans-cultural learning experiences. However, even on traditional college campuses, the classroom presence of students from other cultures does not guarantee that they will proactively seek to learn from one another.

Beyond the Next Frontier

Foresight studies, by definition and in practice, are cross-cutting and focus on causal relationships and feedback loops in diverse areas of human endeavor. In this sense, they can be regarded as holistic. Interdisciplinary study programs are an excellent start toward cultivating the holistic thinking skills that foresight (and other) professionals need, but educational institutions can do more. For starters, they can capitalize on examples of interconnectedness from diverse disciplines ranging from economics (as illustrated by recent "meltdowns") to physics (quantum entanglement). Futurists, economists, and planners are themselves recognizing the shortcomings of quantitative models that once were taken for granted. This is not to relegate reductionist, deductive thinking to the proverbial ash heap of history, notwithstanding the limits of deductive logic (Gödel's theorem) and the implications of quantum entanglement to reductionist thinking. Indeed, the choice between reductionist and holistic thinking

need not – and should not – be "either-or"! Nonetheless, it cannot be understated that binary thinking – extending to the "us-them" perspective that pervades politics and some religions (especially in those cultures commonly considered Western) – shapes how people experience the world. A true culturally-diverse learning environment will enrich itself with complementary perspectives and will cultivate the skill of questioning culture-rooted and other self-limiting assumptions.

The discontinuous, nonlinear thinking that would-be futurists need to cultivate, and the complex interrelationships and feedback loops, are sometimes difficult to capture in the linear written word (including this paper) and spoken word. In the case of conventional printed media, hypertext and the Internet arguably represent the beginning of a quantum leap beyond traditional linear thinking, and educational institutions can position themselves to be on the forefront of "what's next."

To be sure, there are other challenges that are beyond the present scope. For example, in some parts of the world, reading and learning do not fare well in the competition for limited disposable time. A second challenge is maximizing the opportunity to learn from history without letting it overconstrain concepts of the future. Technology itself raises a similar question as to how it can best be leveraged without letting it overconstrain and perhaps even define education. In addition, one might ponder which disciplines will survive many years from now, which new ones will emerge, what "classics" they will maintain, if any, and the future of the notion of "discipline" itself.

For its part, IT presents several challenges, not only to learning and to educational institutions themselves but also to the world in which futurists will live. For example, will decision-making become too data dependent, with a corresponding decline in the role of intuition and judgment? Conversely, will computers take over many "left-brain" (deductive, analytical) functions, leading to a possible resurgence of a "right-brain" (intuitive, subjective) working culture? Furthermore, how will IT impact the "publish or perish" *modus operandi* and notions of "thoroughness" in research, which in present-day universities is intertwined with teaching and learning?

These challenges notwithstanding, the need for foresight educators to cultivate nonlinear thinking skills, to identify complex interrelationships and feedback loops in diverse areas of human activity, to anticipate unintended consequences, and to question hidden assumptions including culture-based assumptions, is indisputable. Furthermore, if schools, colleges, and universities are to "teach the future," they have the imperative to set the example of questioning their own hidden assumptions, even their foundational ones. As World Future Society President Tim Mack advises, one should challenge present assumptions and ask the questions that no one had thought to ask (2008).

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Notes

1. For example, one Nevada state budget proposal called for a 50% budget cut for the two largest state universities.
2. For an example of a contemporary issue discussed in this context, see Brooks, David. (2009). Health care reform's vast trade offs. *Las Vegas Sun*, November 25, 2009, 5.
3. Paraphrase of former US Army recruiting slogan, "Be all that you can be."

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