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ABSTRACT

This paper examines the creation of new knowledge bases in higher education in light of the ideas of Alvin Toffler, whose trilogy "Future Shock" (1970), "The Third Wave" (1980), and "Powershift" (1990) focus on the processes, directions, and control of change, respectively. It discusses the increasingly important role that knowledge bases, the body of knowledge and structure of a discipline, play in higher education. The increasingly rapid change that such knowledge bases are undergoing in light of the technological and information revolutions brought about by computers are also reviewed. The ultimate effect of a knowledge base is seen as increased legitimacy for higher education as well as reaffirmation of higher education's control, authority, and influence over specific disciplines while responding to the new power brokers of knowledge and requests for accountability in a rapidly changing world. (MDM)

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Institutions of higher education (IHE) at the dawn of the twenty first century are embroiled in an information based "war over standards" of knowledge and information. Such is nothing new to higher education. In 1825, a student rebellion resulted in the Yale Report of 1828 (Fiering, 1971) which strived to remove dead languages from the university curriculum. Even though the Yale Report of 1828 argued persuasively for the importance of imagination in advancing higher education's knowledge base (KB) in that era, it failed and was subdued by a vigorous seize of past knowledge despite its attempt to harness human wisdom.

Sir Francis Bacon (1561-1626) was likely the most widely acclaimed proponent of the acquisition of knowledge (i.e. *Nam et ipsa scientia potestas est*: knowledge itself is power). Bacon's primary purpose for knowledge was anchored in religious meditation. Today's locus for knowledge, however, is momentarily different in that such is largely anchored in the creation, management and dissemination of new KB's driven by accelerated emerging technologies. In the mid-sixteenth century knowledge itself may have been power but in the twenty first century, knowledge **about** knowledge itself will be power.

The decade of the 1980's involved a maelstrom of reform movements in American Education. A benchmark was 1983's **A Nation at Risk** (NCEE, 1983) which became the most highly publicized public policy paper on education of the twentieth century. Even

though it had little actual effect upon education as did the Yale Report of 1828, in a sense, war was declared upon the "rising tide of mediocrity...that threatens our very future as a nation and a people," to maintain America's "slim competitive edge...in the world markets." As a result the current "war over standards" in higher education had been declared and by 1987 IHE accreditation bodies had implemented a "new" requirement now widely known and accepted as the The Knowledge Base (KB). The pursuit of knowledge was not the true revelation of the 1980's educational reform movement as many governmental policy makers would like the public to believe. Rather, the natural emergent KB from the intellectual nymphs of various disciplines became the true dun of the IHE knowledge and collective wisdom. Alas knowledge possessed by IHE and their faculties had become transformed into not merely a "pedestrian KB" (Shulman, 1987) where generally well-educated persons simply walk into professions or disciplines off the street. The IHE KB had a Darwinian quality of being a product as opposed to an enigmatic Socratic process alone. The IHE rhetoric of the past became an overt reality for the future, now regarded and accepted as the KB.

Much of higher education's approach to knowledge is premised in conventional practice. Yet that which was considered common was also considered to be insufficient by the public and its

policy makers. An often made remark about the "ivory tower" persona, by those not privy to the internal dynamics of higher education, was that higher education was largely comprised of "old dogs [faculty] who teach new dogs [students] old tricks [conventional practice] that no longer work [for the future]." Thus the overseers of higher education (i.e. boards and accreditation bodies) demanded that IHE pursue a normative approach to knowledge for responsiveness to constituencies with a visible and real KB that was "a firm core of professional knowledge on which to build a stable curriculum" (Bok, 1985-86, p.6).

Quite apart from the long traditions of higher education that were based upon the Middle Ages, IHE in the 1980's were thrust into future shock with failure to do so resulting in severe penalties. For example, in 1990, sixty percent of all IHE's seeking institutional accreditation by NCATE were denied largely in part due to the absence of a manifested and cohort KB. The connection of relating pure knowledge structure with action decisions in absentia of the error of reification became paramount. Reification consists of an abstract idea representing certain properties of claimed knowledge, whereas Cohen (1989) identified its error as "confusing the idea with reality" (p.73). The internal dynamics of current practice American higher education were at last bound together with broad influences and

trends, the continuities and discontinuities in the national disposition, and the ambiguous realities of a competitive global future. The accountable KB of higher education was finally situated in the center of the powershift of knowledge, wealth, and violence at the edge of the twenty-first century.

In 1990 the axiom, "a prophet is seldom welcome in one's homeland," became clearly reversed within the inner sanctum of national power structures by the publication of **Powershift** (Toffler, 1990). Toffler, since 1970 had become a "behind the scene" internationally noted futurist with the 1970 publication of **Future Shock** and the 1980 publication of **The Third Wave**. Although widely read among scholars, business, and world leaders, Toffler's trilogy did not receive mass public accord until the publication of **Powershift** which spent four months in 1990 on the New York Times best seller list. Toffler's trilogy, a twenty-five year odyssey was described by himself with "**Future Shock** looking at the process of change...**The Third Wave** focusing on the directions of change...[and] **Powershift** dealt with the control of change" (p. xix). Historical and/or archival research of both **Future Shock** and **The Third Wave** would indicate that Toffler's first two works were clearly against the then-current public opinion that generated a tidal wave of commentary. So controversial was **Future Shock** (1970) in the prediction of the fracturing of the nuclear family, the genetic revolution, the

throwaway society, in addition to a massive revolt against established education, that the term "future shock" became accepted nomenclature of American culture in a negative sense. As the predictive scenarios identified in **Future Shock** (1970) and **The Third Wave** (1980) became realities not only in American society, but the global community as well, **Powershift** (1990) became publicly embraced and accepted as predictive detail of "new paths to power opened by a world in mass upheaval" (Toffler, 1990, p. i.)

From the collapse of the Soviet Union and global war against Iraq in 1991 to the 1992 riots in Los Angeles with fifty-eight persons killed and one-half billion dollars of damage due to looting, arson and violence, the American public perceived these change actions as random and chaotic. Quite the contrary, these changes in our world were not haphazard, unsystematic, or unrelated. Their interconnectedness was nested in knowledge not the mountainous bleeps of information presented by the media in lists of unrelated trends without a paradigm of interdependence. Thus the changes of our world as viewed by the general public may have been perceived with a sense of anarchy or lunacy and a desire to return or restore our society to the "good ole' days". Hence the simplistic outcry by audiences participating in media talk shows for "communication and education" as the solution to our societal dilemmas.

The powershift for control, authority, and influence over our society, environment, and world cannot be isolated or reduced to mere possession of information. If postulate Bacon's postulate that "knowledge itself is power" today remains true the control, authority, and influence over the world's future direction would have already empowered the global citizenry to act upon such given the overdose of information (i.e. knowledge itself) it already possesses. For example, no longer does the American public have to wait for election results in the next day's newspaper to find out that Truman defeated Dewey for President as it did in 1945; for today, the American public can immediately find out that President Bush defeated challenger Pat Buchanan in a presidential primary before the voting polls even close. Alas, information (i.e. knowledge) itself is totally insufficient to empower one's life or environment. Rather, it is the knowledge **about** knowledge that now empowers one's life or environment.

Prior to the 1945 G.I. Bill and subsequent college financial aid programs the vast majority of the American public had little or no access to a college education let alone to interact with a professor. Yet today due to rapidly emerging technologies all Americans from preschool through retirement ages are bombarded by noted higher education professorial commentary and interaction on matters ranging from the attire of Big Bird on Sesame Street to

the adverse global impact by destruction of rain forests. In an ironic sense, the public's mass access to the once lofty higher education experience has resulted in the losing intellectual autonomy and exclusive privilege of self-determined academic freedom and pursuit to political correctness and public accountability.

A KB has been described by Reynold's (1989) as the difference between "state of the art" of knowledge and its "state of practice." Galluzo and Pankratz (1990) implied that a KB is a body of knowledge substance and structure of a discipline that results in informed decision making practice. In short, KB's must be an amalgam of theory, research and wisdoms of practice within each of the disciplines that comprise higher education.

Murray (1989) advised that college students adopt a skeptical view toward the claims of theorists and researchers because of the fact that disciplined KB's in higher education were yet in an early period of formal development. Skepticism aside, education reformers and higher education accreditation bodies have been adamant in the edict that college and university program be grounded in a KB of theory and research. Further heightening ambiguity has been the necessity for higher education KB's that were reality, not rhetoric, and manifested themselves in some visible type of product. Prior to this externally based mandate higher education had adopted the self-purposeful legacy

of knowledge base without providing attention to the process of its development and articulation with both existing and emerging constructs of theory, research, and wisdoms of practice.

The focal point of the higher education KB appeared to be discipline based with an academic orientation (Feiman-Nemser, 1990) whereas the processes of such tended to be profession based with a pragmatic orientation (Schon, 1983). With respect to organizational theory and design, the KB concept in higher education was likely to suffer from inappropriate functional and product structures (Daft, 1989) because of developmental incoordination within the interdependence of purpose, process, and decentralized creation of the KB itself.

The ultimate purpose of a KB is to gain legitimacy for higher education as well as to reaffirm its control, authority, and influence over its disciplines while responding to the new power brokers of knowledge and requests for accountability in a rapidly changing world. It was evident that if IHE did not respond to this challenge that support, both fiscal and traditional, would be threatened and the private economic sector would assume the responsibility. To that end IHE were compelled to invoke a KB strategy to help higher education achieve overall performance goals in terms of effectiveness and efficiency if it desired to continue in the area of knowledge and its expanded boundaries of control and wealth. The end may have been clear to

higher education but, the means translucent at best. The powershift of higher education outworn KB's had been challenged and the traditional IHE power structure nested in knowledge itself render extinct.

A significant body of literature existed which identified the salient characteristics of a KB, the purpose of a KB, and the necessary schema for IHE to determine effectiveness of KB product outcomes. There also existed a significant body of literature that suggested the inherent problems and difficulties associated with the creation of KB's in higher education disciplines. The multidisciplinary and interdisciplinary processes, let alone the transdisciplinary process, however of creating higher education KB's was found to be extremely lacking.

Innovation models of group based development have been in existence for several decades. Higher education curriculum, however, is largely characterized by individual-oriented models of the innovation process. (Rudolph, 1977) internally bound by individual academic freedom and "turf protection" by faculty while externally presented as an open, collegial and collaborative forum of scholarly advancement of intellect or knowledge. The realities of higher education politics aside, individual-orientation models of innovation required that attitude formation was the critical decider as to whether change

confirmation was adopted or rejected (Rogers and Shoemaker, 1971).

Clearly it is evident that if higher education desires to remain in the contest of knowledge powershifts of the twenty-first century, KB's are the admission price. Individual IHE are going to have to operationalize a new visible and operational product for their constituencies known as a KB. They must realize that KB development creates a tremendous disequilibrium among the higher education community. College and university faculty must begin to cease the hunt for scapegoats and endless, yet thorough, contemplation as to "why is this happening to us, we didn't cause this problem," to "how are we going to respond without being left behind." The era of mass standardization and production of higher education programs has been assigned to the museum alongside the pterodactyl.

It has been said that, "there are three types of people in the world: those who make things happen; those who watch what happen; and, those who wonder what happened." IHE and higher education faculty are likely to be in the third scenario in the twenty-first century wondering about the power of knowledge itself in lieu of controlling knowledge if KB's do not become intricate realities of higher education as is the long-winded commencement address of today.

Higher education KB's, once made publicly visible and operationalized via curricula still remain vulnerable if permitted to exist within the inertia of higher education tradition. There is a hidden paradox in the powershift struggles of knowledge. As higher education creates more specialized and intricate KB's, there is, in addition to a surging demand for higher performances and standards, a counter effect to make KB's even more versatile by accommodating even more multiple standards of higher knowledge and learning. Consequently no sooner than the long, semantic, and arduous process of development that results in a KB that is a visible and viable product concludes, new knowledge and technologies have driven it into obsolescence or irrelevancy and created multiple standards of knowledge. Thus as soon as higher education has created a KB standard, the playing field itself alters into an even higher more complex plane that likely has yet to even reinforce the players (i.e. faculty). The KB is now the battle front for the larger, continuing war over knowledge and practice standards that control, influence, and regulate knowledge itself.

It is critical to further be cognizant of the fact that this "war" of knowledge standards is not limited to the executive board rooms of multi-national corporations and the hallowed halls of academe. It is raging in the home over traditional family values, in the work place over "isms", in churches over moral

righteousness, in government over politically correct actions, in the world over human rights, in medicine over ethics and practice, and so forth and so on. The battle front over who controls and influences knowledge about knowledge is no longer unidimensionally centered upon our national institution of education. It is everywhere and appears to have no visible boundaries in sight. Toffler (1990) summed it well,

"Despite exceptions and unevenness, contradictions and confusions, we are witnessing one of the most important changes in the history of power. For it is now indisputable that knowledge, the source of the highest quality power of all, is gaining importance with every fleeting nanosecond. The most important powershift of all, therefore, is not from one person, party, institution, or nation to another. It is the hidden shift in the relationship between violence, wealth, and knowledge as societies speed toward their collision with tomorrow. This is the dangerous, exhilarating secret of the "Powershift Era." (p. 464).

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