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THE RHETORIC AND PHILOSOPHY OF EDUCATION:  
FINDING WHOLE LEARNING IN AN AGE OF MECHANISTIC PEDAGOGY

A Dissertation

Submitted to the McAnulty College and Graduate School of Liberal Arts

Duquesne University

In partial fulfillment of the requirements for  
the degree of Doctor of Philosophy

By

Georgia M. Bedford

August 2012

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Georgia M. Bedford

2012

Georgia Bedford

“The Rhetoric and Philosophy of Education: Finding Whole Learning in an Age of Mechanistic Pedagogy”

Ph.D. in Rhetoric

June 18, 2012

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## ABSTRACT

### THE RHETORIC AND PHILSOPHY OF EDUCATION: FINDING WHOLE LEARNING IN AN AGE OF MECHANISTIC PEDAGOGY

By

Georgia M. Bedford

August 2012

Dissertation supervised by Janie Harden Fritz, Ph.D.

This project examines the communicative structure of the contemporary rhetoric of crisis and reform narrative dominating public conversation about education, as a post-industrial body of discourse deeply embedded in historical ideals for a mass system of public education. In challenging the crisis-centered narrative, this work seeks to identify historical discourse strands that have shaped thinking and action in the construction of educational policy, legislation, administration and pedagogy. This work evaluates the misalignment in the assumptions which guide the perception that an academic relationship exists between higher education and secondary school which is in contrast to the original purpose for a mass system of public education. In part, this research is a response to discourse that applies responsibility to colleges and universities in the ongoing rhetoric of crisis and reform calls for greater accountability and assessments as a means by which the problems of education may be reversed. It is the position of this

research that these systems are not aligned yet increasingly, public discussions about educational failures assume that secondary school is the preparatory ground for the transition to higher learning.

## DEDICATION

I dedicate this research to my husband, son and daughter, all of whom made tremendous sacrifices in granting me hundreds of hours of time, unrelenting patience and extraordinary understanding so that I might complete this work. Most importantly, I commit this work to Joseph.

## ACKNOWLEDGEMENT

Scholarship that is of any value rests upon the commitment of the researcher and a strong desire for completion which is a personal journey made possible only through the contribution and even sacrifice on the part of others. Perhaps the most important of the many gifts a researcher receives is patience and a great deal of energy and excitement from individuals who hold no other interest than to give support in the hope that the work might ultimately succeed. This researcher has benefited from many such relationships, all of which are regarded most highly in the spirit of gratitude.

Dr. Fritz has been a strong foundation of support and encouragement throughout all the years leading up to this project and I deeply appreciate her ability to challenge me, asking difficult questions while always lending a calm voice of understanding and patient guidance. Her belief in this project at times allowed me to see beyond what was before me when the path toward completion seemed unclear.

Dr. Troup for inspiring me to love ancient rhetoric, and its masters and for inspiring me to embrace the scholar I possess within me.

Dr. Thames, for the lecture that blew my mind in my first semester. His perspective on Aristotle, Marx and the organic versus mechanistic is one that has stayed with me and served to provide an insight into this project, the influence of which I could not possibly have foreseen in my first semester of the Ph. D. program.



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## **Chapter 1**

### **History of the Rhetoric of Crisis and Reform in Education**

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#### **Introduction**

Education in the United States as an institution has long been recognized for its critical role in forwarding the overall economic growth, domestic stability and international development of the country (Button and Provenzo 155). That is a matter not in dispute. Differences do arise in perceptions as to what kind of system is needed to support that agenda and to what ends education should aspire in preparing individuals for a lifetime of success. Concerns that students are not emerging from the public system of education with the ability to transition into a competitive workforce spark disagreements among social, political and cultural groups as to why public education is not achieving its goals.

Underlying the disagreements, questions and arguments about what plagues the American system of public education are many factors that invite inquiry; too many to consider as part of this project. This research will narrow its focus to one aspect of the larger crisis and reform narrative which is rooted in a basic problem of communication that touches upon two primary issues; a misalignment in assumptions guiding public expectations for the K-12 system as preparatory ground for higher education and the extent to which the original purpose in the design of the system of public education continues to guide the organizational framework, administration and pedagogy of public schools. At issue is a fundamental ethical issue that raises the question of what education ought to do and who should participate in making that

judgment. These are not questions new to modern society; the ethical question of good has eluded all historical attempts to define the purpose of education.

The historicity of the practical versus knowledge debate which positions a system geared toward practical goals against knowledge aims becomes clear when framed as a modern-day, complex reenactment of the ancient dispute between Plato, Aristotle and Isocrates in their opposition to the methodologies of ancient Greek teachers of rhetoric: the sophists. Plato critiqued the educational philosophies of Protagoras and Gorgias, specifically, their approach to the teaching of rhetoric, the general education of ancient Greece, as nothing more than “the art of persuasion” (Gagarin 275). Plato found their practice to be lacking in ethics for its focus on the development of practical skills and its lack of regard for knowledge as divine (Plato *Phaedrus* 6). Aristotle did not acknowledge such a division; he believed knowledge to be of such a supreme good that it is by nature provides “great practical importance for the conduct of life” (Aristotle *Nicomachean* 1094a ii-2). Aristotle believed the unification of knowledge and practical aims to be a necessary aspect of the lifelong learning pursuit where neither should be classified as a separate ideal.

This research looks primarily to Plato in understanding how practical and knowledge aims are necessarily unified in a whole lifelong education. However, this research also examines how matters of education have moved beyond the boundaries of scholarly conversation to include economic, social and political interests, a matter also found in the diverse culture of classical Athens. As a city of diverse social and political values, the environment of the Athenian polis gave rise to varied opinions as to how societal needs may be brought into balance with individual rights, household



duties and civic responsibilities within the polis. Accordingly, sophists sought to educate free men in practical skills required both for participation in public deliberations before the “Athenian assembly” (Poulakis 5) and in representing their personal household obligations.

Sophists capitalized upon the opportunity to educate free men in skills they demanded and needed in order that they may develop the ability to participate in public deliberations before the “Athenian assembly” (Poulakis 5) in representing their personal household obligations. Notable philosophers and rhetoricians, such as Plato, argued over whether an ethical education could be achieved by sophistic method but it was not a conversation limited to scholarly review, a dispute this research documents in the communicative strands found throughout history. What the ancient Greek conversation conveys is a tradition of social influence; the relative social agenda of a society ultimately guides beliefs as to what education ought to do. Plato, in his analysis of human thought and action, describes a dialectical struggle that confronts humans in defining the good in general but becomes particularly salient in understanding why decisions about education prove difficult when the desires and needs of society must be weighed against educational goals.

Plato argued that there are generally two “ruling and guiding principles” (*Phaedrus* 17) upon which the motivational ground for action rests: the “innate desire for pleasure” (*Phaedrus* 17) or that which will achieve a particular outcome or goal, and a set of beliefs as to what is best or good. Human societies are constantly attempting to bring these two forces are in balance; however, it is likely that one will eventually dominate the other, which can result in actions that are unrestrained by

the good (*Phaedrus 17*), a dichotomy represented in historic attempts to reconcile economic, political, and social interests with questions as to what purpose education should serve in attending to the lifelong needs of individuals who, through education become contributing members of the larger community.

Social, political and economic interests have come to hold an enormous influence in shaping educational policy according to values and beliefs representative of multiple perspectives. This research will examine just what these forces are, how they formed the original intent behind the design of the K-12 system, and the epistemological impact of limiting the scope and purpose of education to the “school-long” (Helterbran 261), practical “skills” (Johnson 201) orientation that has geared educational policy, administration and pedagogy to a focus on practices and processes, now associated with accountability, assessments and achievement measures. The existence and tenacity of these forces will become apparent in examining the role of rhetorical persuasion as American society of the early 1900’s came to be persuaded to abandon tradition and theory in favor of a new industrial educational paradigm. Social and political forces have employed rhetorically persuasive devices throughout history, in structuring public perceptions, garnering public support of educational initiatives and, more recently, as an unintended consequence of research that may inadvertently heighten public concerns and provide support to the idea that accountability, assessments and measurement strategies are founded upon an established relationship between secondary and post-secondary education.

In examining the influence of these interests, this chapter will provide a basis for understanding the relationship among social, political, and economic forces and the use of persuasion in forwarding individual and civic interests guiding educational policy. Specifically, the interests behind these forces played an enormous role in constructing the discourse that would frame social problems as a rhetorical crisis of education from which the industrialized system of education was founded and continues to function today.

The historical roots of crisis language as the center of contemporary discourse links directly to industrial aims for a practical system of education that was believed to have an “ethical end” (Bagley *Educative* 40) but they also provide an explanation for the communicative resistance to rhetorical engagement about the problems confronting education. In challenging assumptions that a secondary education is preparatory ground for the transition to college (Brubacher *A History* 413; Zafft 6), this research employs the story of industrialized education in arguing that the public system of education has only a limited relationship with the academic philosophies and expectations of higher education. Finally, this chapter will explore the contextual landscape of the forces directing policy toward standardization for institutions of higher learning in arguing that the true territory of colleges and universities should be viewed as the starting point of adult learning.

## **Basis of the Rhetoric of Crisis and Reform in Education Narrative**

At the present, scholars, government officials, community leaders, parents and students are engaged in an intense dialogue about the state of learning in schools and the profound impact the problem of education has had upon our economy and our standing as a country within the international community. Discourse about the state of education has focused primarily upon teacher failures with critiques stemming from beliefs that schools lack efficiency, teachers are not effective and students lack the desire to be productive. Solutions to these perceived failures, has centered on practices, processes, and legislative interventions which require, at both the state and federal levels, demonstrations of proficiency in meeting broad mandates tied to funding. This has had disastrous consequences for both teachers and students who are all trapped in the assessments, performance and accountability game. Assessments through testing has become a “high stakes” (Roderick, Jacob and Bryk 333-354) playing field and its use gives a false presentation that a plan is in place to bring about much needed change within the school system, but in fact, they worsen the problem.

Schools and teachers must make the choice between what instruction is implied by the subject matter, and what is “implicit in the examination” (Madaus 616) and the choice is typically to teach what will be “useful” (Bagley *Craftsmanship* 98) to get kids through the test. Students who emerge from this systems approach to teaching and learning are ill-prepared to move on to college, yet there is an assumption that primary and secondary education serves a preparatory place in the transition to higher education.

## **Social, Political, and Economic Influences**

### **Research as a Persuasive Element in the Rhetoric of Crisis and Reform Narrative**

The rhetoric of crisis and reform in education narrative centers primarily on an arbitrary notion of failure that employs industrial metaphors of efficiency that appear to speak to what education ought to do. There is a temporal disconnect in the use and meaning of these concepts which harken back to an industrialized model of education that has no real point of reference in a changed society. Because efficiency sounds like an ideal aim, this standard sets an ideal that is nearly impossible to attain. Administration ought to be efficient, teachers ought to be effective; students ought to achieve an ideal of proficiency in their performance on standardized exams; and assessment and accountability measures ought to ensure that every component within the mechanisms of educational organizations function accordingly. These metaphors are reiterated continually in public discourse and educational policy, yet they say very little about learning, or whether students emerge with a foundation of knowledge in place that will be necessary for future educational endeavors.

Research inadvertently reaffirms the crisis narrative in its use of language that evokes metaphors of efficiency in assessing student performance in areas valued as key in terms of college-readiness; however, examinations into areas such as curriculum are more difficult. Many studies conducted by universities do not examine issues at the level of school learning at all; rather, they remain on the outskirts of “educational subject” examinations (Graham 125). This research does not in any way suggest that academicians intend to engage in methods designed to perpetuate the crisis narrative through directly

persuasive tactics; however, due to the complex nature of the issues it can be an unintended consequence of the assumptions guiding research.

For example, some studies assume that a general connection exists among primary, secondary and post-secondary institutions in calling for a “more robust” (Zafft 6) model of college preparatory requirements. Generally, this argument presumes that high-school level competence should be an indicator of college success; it assumes that high school is a transitional phase toward higher learning. Assumptions guiding research may also suggest that institutions of higher learning hold some accountability for educational failures amidst allegations that colleges and universities lower standards in order to accommodate students who would otherwise not be accepted (Brubacher 406).

Research can also send a general alarm about student performance but it may not necessarily explain what the metaphors being used actually mean. A study performed on first-time college applicants in Florida shows nearly 40 percent did not meet basic reading, writing and math readiness levels back in 1994 (Rodriguez 1994) but “readiness” is too vague a concept to measure at the state or national level without further analysis and explanation of how readiness is defined. Some studies also imply there to be a standard of general intelligence, such as those that describe America as a country is “less educated” (Zafft 6) than in previous years or report on a student’s perception as to whether he or she felt challenged in high school. College readiness, competence, and adequacy are difficult to define (Brubacher *A History* 413; Zafft 6). These terms all lack coherence in creating the story of what is wrong in the system and why but they do affirm that serious disparities exist between the K-12 learning continuum and that of higher

education. Questions remain as to why these two communities cannot simply engage in a communicative exchange toward a unified solution.

### **Social, Economic and Political Rhetoric in Educational Policy**

Even if colleges and universities formed a task force in cooperation with high schools in an effort to construct a collaborative body of parameters by which to unify the K-12 and college learning tracks, the proposed solutions may not move forward. Why? Because education is not simply about learning. It never has been. Therefore, educational goals are not determined primarily at the school level; they are decided by social, political and economic forces that reflect the relative mindset of “pluralistic loyalties” (Butts vi) which are composed of diverse perspectives and the competing motivations of individual and group interests. Loyalties of each group translate to individual values and belief systems that often run parallel to nationalistic ideals and civic virtues, such liberty, equality and justice.

The explicitly rhetorical nature of social influence in educational policy lay in the idea that public problems such as education are civic issues that invite participation and independent answers in the form of a shared consensus that expresses the desires of the larger community (Asen 2). These ideals come to be represented within educational policy and while these perspectives are both informative and necessary, they can also be divisive elements in bringing about change. Therefore, social forces must be viewed in terms of the strength of their contribution to the process by which the needs of society are determined and educational goals and policy decisions are made in the context of which the larger societal agenda is achieved. Throughout history, this has been the case.

For example, as early as 1642, religious, social and political forces pushed forward, legislation that made education compulsory in the American Colonies. At the time, religious and political influences moved from a Puritan ideal for an orthodox paternalistic commonwealth that would embed religious, moral and civic values deeply within the culture. In support of this effort, reading was deemed a critical skill needed to ensure that the people, from childhood, could learn and internalize principles of Puritanism, understand how to become a law-abiding citizen, and become intelligent in matters pertaining to the community (Jernegan 24).

Also, following the American Revolutionary period (1775-1783) when the first schools were enacted by legislation in Pennsylvania, to the enactment of the Bill of Rights (1791) (Butts 44), public conversation engaged questions as to how the role of schools might be supportive of the need to frame a national identity rooted in “organic” (Butts 12), values of liberty, equality and separation of church and state. The public sought to embrace, in all things, the values outlined in the Bill of Rights of 1791. Accordingly, schools were expected to “engender a national identity, usually through an exaggerated spirit of nationalism” (Butts 44). This is one of the early periods of reform where the public desire for mass education brought forward questions of access, calls for the centralization of schools, and commitments to expanded programming.

Graham points to several more recent periods in which the civic agenda for educational policy was set according to social and political attitudes and socio-economic conflict. During the “Assimilation” (15) period, between 1900 – 1920, Americanization of immigrants was the agenda. “Adjustment” (52) took place from 1920 to 1954, and is described as a period of social unrest due to a growing disparity



between rich and poor. “Access,” (98), which occurred during 1954 to 1983, saw the passing of legislation such as *Brown v. Board of Education*, as well as laws designed to provide for the needs of disabled students. Finally, “achievement,” the era still in effect today, started somewhere between 1960 (Butts 106) and 1983 (Graham 1), which demonstrates an overlapping effect that is typical of these shifts.

Butts argues, that during the 1960’s national interest drove the achievement metaphor out of concern for the country’s ability to compete with the Soviet Union following the launch of Sputnik (Butts 106). However, Horace Drury, formerly with the Department of Economics and Sociology for Ohio State University, locates the achievement metaphor squarely within labor and production philosophies of the industrial era (Drury 79) despite the addition of objectives much later that were designed to gauge “absolute intelligence” (Graham 109) and student performance levels by subject. These goals were designed to identify the gifted or students considered to be of equal intelligence and ability. These students were “clustered” (Graham 109) in the same classes, leaving upwards of 90 percent of remaining students in classes deemed for the average. While there are other overlapping categories which weigh alternately between competing social, political and economic influences, throughout the 1920’s and 1970’s there was more conversation about “academic studies and intellectual discipline” (Butts 263) interlaced with a recognition of individual capabilities.

Social forces acting in concert with crisis can also be influential in the adoption and shift of educational paradigms. Kuhn suggests crisis and social pressure to be traditions in their relationship to rhetorical interruptions in practice as new problems or anomalies arise and bring challenge to existing methodologies. Researchers and

academicians may alter the way they operate because the theories guiding their practice may no longer account for new developments. Although new problems are generally regarded as a puzzle that demands extensive investigation and testing to solve, when the public becomes aware of a problem or the issue is deemed to have potential mass impact upon society, social pressure can be persuasive in turning a problem-solving activity to the adoption of an entirely new paradigm. This is a risk, in that paradigm shifts always bring about destruction to standing traditions, but the existence of a crisis or anomaly can act as rhetorical consensus that a change is necessary (Kuhn 67, 75). As this chapter will examine, the industrial revolutionary paradigm formed in just such a manner.

Ultimately the interests of any group can exert control over the ability schools have to direct learning goals even at the level of curriculum. As public institutions, schools are largely situated in a reactionary posture waiting for these forces to impose demands upon them. Primary and secondary schools are particularly vulnerable because the public school system itself is mandated by federal law, and taxpayer dollars are the primary source of support (Callahan 1). Therefore, administrators are bound to be responsive to regulatory forces exerted by state and federal education policies, which are in part, generated on the basis of social interests. At the present time, policies are dictated by standardization (Graham 185-187) and achievement (Graham 183) rhetoric. Social pressure arising from individual, even civic minded groups seeking to achieve their own ends serve as a distraction from the asking of real questions. There are simply too many voices in the crisis and reform conversation.

## **Social Forces of Crisis and Reform in Construction of the Industrial Educational Paradigm**

By far, the most important example of the persuasive power of social pressure strengthened by crisis discourse is found in the circumstances leading up to the Industrial Revolutionary movement that created the space for the adoption of the industrial educational paradigm. Not only did social, political and economic interests force a shift away from a traditional model of education (Brubacher, *A History* 242) to an industrialized system, but the real impact of these influences would set forward a long-term shift toward industrial metaphors of production in the contemporary organizational structure, administration, pedagogy, the daily lives of K-12 students, and in the hierarchical structure of colleges and universities (Koerner and Petelle 25). The question becomes: How could social forces hold such a high degree of power in shaping public perceptions that Americans would adopt a largely unproven solution, which Chapter 4 will address, of such profound impact?

Three factors created the space for public acceptance of the industrial educational paradigm: the presence of both mass migration and immigration, the expansion of industry and the discovery of a new science of organization and management: scientific management (SM). While any one of these conditions would present a challenge in the normal evolution of any society, the presence of all three factors created vulnerability in the lives of individuals and families and in the consciousness of the entire country as America renegotiated a new economic and social identity.

First, mass migration away from agrarian cultures to urban communities meant that individual identity formerly founded upon the interconnectedness of work and everyday life would be defined by industrial demands for complexity and efficiency (Button and Provenzo 215). “Timethrift” (Simon 73) marked a shift that fundamentally affected every aspect of life. Even “modes of schooling” had to become more “efficiently directed” into the minds of children as the production ideal invaded the home and social life of the poor (Simon 73; Button and Provenzo 215).

Mass immigration from Europe added to the population and brought diversity in cultural and linguistic abilities of immigrants. These added factors, created both physical and economic problems for communities (Callahan 15) already struggling to keep pace with school enrollment which was growing at an inordinately rapid pace and creating new demands on an already burdened system. These difficult social conditions turned quickly to unrest in response to demands for more public funding for schools while economic pressures from unemployment inspired negative sentiment against public institutions in general. The cost of living, having risen by more than 30 percent, directly impacted school costs, turning public discourse about the economic state of the country to public discontent against schools administrators (Button and Provenzo 219). Callahan describes this period as a time of loss during which the “story of opportunity” (Callahan 1) that had described American society lost coherence after the American Revolution.

Confounded by unemployment, population expansion, increases in taxes and demands for public services, the communicative boundaries of community leaders eroded under the growing public disenchantment with traditional responses. Calls for stronger leadership that would be more responsive and better qualified to attend to emerging

social needs created an opportunity for business leaders whose new status as pillars of the community presented them with the opportunity to reframe these complex social problems as a crisis in education (Callahan 2), a move that would be a tremendous financial advantage.

### **Business Leaders: The Agents of Change**

Who were these new community leaders? They were self-made self-made millionaires, among whom John D. Rockefeller and Andrew Carnegie could be counted (Button and Provenzo 192). Individuals of their class benefited directly from the economic and social shift toward industry and increasing population numbers. These elite individuals known as “captains of industry,” including Andrew Carnegie, John D. Rockefeller, J. P. Morgan and others (Callahan 2) emerged as leaders in business and communities, recognized for their economic prowess and keen insight. They arose to this status in part, as a result of enormous social and economic challenges but also because American society had been groomed to idealize material success. The social consciousness of the entire country had come to internalize an association between values such as honest and hard work with the story of success in which industrialists lived as a result of adopting economically based values. Callahan states:

By 1900 these men had been accorded top status by most of their countrymen, and quite naturally their values and beliefs (including the economic philosophy which had made it all possible) were widely admired and accepted. Indeed the acceptance of the business philosophy was so general that it has to be considered one of the basic characteristics of American society in this period. Calvin Coolidge was not overstating the

case when he said in 1925: “The business of America is business”

(Callahan 2).

Business leaders held a particular interest in the construction of a public school system in an atmosphere in which the progressive movement brought a fiscal disadvantage to their bottom line. Combined with the opportunities immigration and migration brought in terms of potential labor, the progressive movement challenged conditions to which both men and children were exposed in these new industrial complexes. Activists and academicians began to publicly criticize conditions they observed to be oppressive, inspiring some of the most enlightened works in education. Scholars such as Frank Ward, author of *Dynamic Society* (1883), working from Darwin’s theories, would construct his theory of culture and William James, in *Principles of Psychology* (1890), geared his work specifically toward education. John Dewey’s *The School and Society*, released in 1894, and *Talks on Pedagogics*, written by Sir Francis Parker (1894) were also released. These publications continue to hold relevance as the foundation of social theories as well as models that would be applied within educational theories.

These works were enormously important in framing a context in which social systems and relationships within organizational structures could be analyzed, but they were also important in the development of educational models for the management of public education. “Progressive reformers” (Button and Provenzo 216) borrowed from this body of scholarship in their fight to bring awareness to the plight of all ,but they were most effective in addressing practices affecting children. Small groups, such as the National Child Labor Committee (NCLC) of the early 1900’s, successfully argued for legal protections that would force minimum working-age requirements, with some states

limiting the employment age to fourteen, while others set “sixteen” (Button and Provenzo 214) as the cut-off point.

Activism and scholarship were influential in changing public perceptions about the experience of the working child but as an unintended consequence, they became the foundation for a shift in the education of children toward an industrialized model that would embody many of the oppressive elements they criticized. Following legislative intervention that set limits on child labor, businesses resorted to importing artisans from Europe to perform the daily tasks of industry, a situation business leaders intended to change. The success of German industrialist also provided impetus to push the American public toward a more competitive mindset (Callhan 12-13). All of these factors added strength to the persuasive ability industrial leaders had in convincing the American public to construct a system of education that would achieve industrial aims.

### **Rhetorical Persuasion in the Narrowing of Education’s Scope and Purpose**

Business leaders quickly manipulated public conceptions about the true nature of the social and economic problems as a crisis of education while also highlighting the potential for prosperity if America gained a competitive advantage Europe. All of these possibilities were available through an industrialized educational system which would provide for a ready workforce and the potential for economic growth. So began a rhetorical strategy employing the language of crisis to reframe legitimate social problems as educational failures prime for efficient, systemic interventions.

A campaign of rhetorical persuasion followed, applying “propaganda techniques” (Callahan 223) designed to promote the benefits of integrating scientific management (SM) business values and practices to school administration and abandoning traditional

education for the practical. Through the early 1900's, public relations campaigns continued in the construction of persuasive messages that were disseminated throughout the available media outlets of the time, including journals, books, and speeches at public educational meetings, and through direct actions taken by school boards and educators.

Newspapers and educational journals employed ad populum<sup>1</sup> arguments designed to appeal to public concerns about wastefulness, directly disparaging the character of school administrators for failing to operate within standards and practices defined according scientific management business efficiency models while also pointing to the fact that students were not emerging from schools with the capability to transition to the workforce at a time when industry experienced its highest demand for skilled labor. Articles also promoted efficiency to gear education away from traditional teaching models to those relevant to the moment, such as: "Our Medieval High Schools: Shall We Educate Our Children for the Twelfth or the Twentieth Century?" and "Medieval Methods for Modern Children" (Callahan 50).

Within these appeals, SM was billed as a "magic power" (Callahan 20) that would solve the school problem and deliver on the promise of modernism that would rewrite the American story of progress and prosperity. To achieve this dream, America had to apply the "rigorous standards" (Bloland 523) of scientific management to education. Even Roosevelt called for "public agitation for 'greater national efficiency'" in associating scientific management with greater levels of competency from companies in arena ranging to household servants (Taylor 6). Following these shifts, business values

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<sup>1</sup> Walton defines ad populum arguments as an informal fallacy designed to appeal to the emotions or feelings of "the gallery" or "the people" to "win assent to an argument not adequately supported by proper evidence" (264).



would forevermore be unified with educational policy by bringing organization and centralization through hierarchy, efficiency, and practicality to administration and pedagogy (Koerner and Petelle 26; Reynolds et al. 91-92).

Interestingly, the guarantees of SM were not envisioned by Frederick Taylor himself, at least not initially. Prior to 1910, Taylor's system of SM was known primarily to the Interstate Commerce Commission which had previously conducted hearings to consider how SM principles might bring efficiency to the railroad industry and at the time, Taylor made no association between his principles and education. But following these hearings and the publication of several articles, Taylor, scientists, politicians, and business leaders saw the potential for the application of SM to all institutions, including education and, in fact, all aspects of American life where greater efficiency of operations was demanded (Taylor 7-8).

### **Prominent Scholarship in the Industrialization of Education**

Prominent education scholars brought ethos to the school efficiency argument, some of whom provided supportive research that would help shape the industrial school model while others forecast potential disaster for the future of education. William C. Bagley, a renowned American educator, founder of essentialism and Superintendent of the Training Department at Oswego, New York State Normal School, wrote several preparatory books written for teachers seeking positions within universities, but stated that they were especially for those entering elementary schools. He was regarded as a teacher of teachers, authoring several publications geared toward the elimination of “the waste of time and energy that is involved in the work of the school” (Bagley *Educative* ix). He argued for a practical “useful” (Bagley *Craftsmanship* 98) focus in education,

asserting that “the experiences that issue from ‘practical life’ will have a more lasting effect and will function more effectively than the experiences gained in school” (Bagley *Educative* 24).

Bagley authored several publications on the topics of teaching, including *Educational Values*, *The Educative Process*, *Classroom Management*, and *Craftsmanship in Teaching*, in which he outlined a purpose for education. Generally, his scholarship can be characterized as a philosophy of scientific management in education. Bagley translated SM principles to construct a strong body of SM metaphors for good teaching that promoted efficiency, effectiveness, and utility in developing a science of teaching. He defines the origin of the practical as a value found in the informal practice of everyday life experience, which he acknowledged was largely “unsystematic,” and “uneconomical” (Bagley *Educative* 25) in its primitive state.

By capturing the “division of labor” (Bagley *Educative* 28) functionality of informal experience and applying its more practical aspects to formal education, he argued that schools should strive for and could achieve the ultimate end of education, which he implied may be at the finish of secondary school. In so doing, he identified what subjects are most important, including reading, writing and arithmetic, as well as those that should be “sacrificed” (Bagley *Classroom* 55), courses which fell primarily in the science category (Bagley *Classroom*, 64). Bagley sought to make education “useful” (*Craftsmanship* 98), reiterating a call made previously by Andrew Carnegie: the abandonment of tradition and the elimination of theory. His scholarship, discussed in greater detail in Chapter 4, was foundational in bringing an organizational structure to

administration, pedagogy, the environment and the everyday life experience of children in schools.

Meyer Bloomfield, author of *Choosing a Vocation*, is considered to be a leader in the early 1900's vocational guidance movement, formed through the cooperation of organizations, and practitioners to provide training and educational materials on vocational choices of youth. From his work, entire vocational specialties evolved, including "occupational placement, employee selection and worker supervision" (Savickas 259). His work assisted in developing a formalized vocational educational arm of public education through which many students learned skills directly applicable to industrial careers.

John Dewey, who was highly influenced by Francis Bacon's commitment to "knowledge as power" (Tomlinson 365), held deep concerns that individuality and the overall quality of American life in general was eroding under the efficiency movement. He strongly opposed the modernist rejection of tradition that placed theory and practice in a dualistic relationship and sought, through his philosophy of pragmatism, to conceive of a science of praxis that unifies theory and practical skill. Dewey saw the "Either-or" (Dewey 20) philosophy behind the progressive struggle against traditional and in favor of "new" (Dewey 19) education as having the potential to bring about "negativity rather than positivity and constructivity" (Dewey 20) to the future of education, specifically in the devaluation of experience. However, Dewey's theories on experience and his commitment to theory were not adopted. Only that part of his research which embraced the practical was applied to the systemization of educational processes (Diggins 3) and

mechanization of pedagogy, a measure that contributed to the “anti-intellectual(ism)” (Ravitch 29) of American schools.

James Thorndike, of Columbia University’s Teachers College, is also considered to have made a substantial contribution to the American system of public education in the areas of curriculum, pedagogy, and organizational structure. He idealized the notion of a “social good” (Tomlinson 366) in contrast to a Platonic ideal of a good (Demos 245) founded upon truth-seeking. Thorndike brought quantitative techniques to learning that limited the teacher/student interaction to mechanistic processes. Some scholars argue that in his desire to construct a science of education, he made certain epistemological and psychological assumptions that ignored the “complexity of the learning situation, systematically ignoring the creative, sentiment, and culturally embedded character of human experience” (Tomlinson 367) in his staunch division of labor mentality.

The scholarship of these theorists and many others, disseminated through public outlets, educational journals, and teacher training programs, contributed strong credibility to the persuasive campaign for industrial schools and mechanistic pedagogical approaches that would come to define contemporary education.

### **The Model and the Method: Mechanistic Pedagogy and Factory Schools**

Mechanistic pedagogical methodology, developed largely from the work of these scholars, changed how students were and are educated, what they are taught, and systematically constructed definite standards by which performance in every subject could be measured with accuracy and performed with efficiency. Efficiency experts were brought in to assist in bringing organization to every function of school life. These individuals were prominent in systematizing operations within efficiency divisions of

companies like Du Pont, and specialized in applying Taylor's scientific management time and motion studies in identifying the appropriate machinery for any job. They were responsible for developing the best manner by which to perform operations and their plans were used in the design and layout of buildings so that products could be moved about with ease (Stabile 372). Callahan refers to their use in schools as "one of the most significant movements in all of our education history" (Callahan 97).

Efficiency experts worked directly with schools to identify how superintendents could operate more efficiently and teachers and students could become more effective and productive in their daily routines. Calculations tailored to school specific variables were designed to track statistics on student enrollment, grade level completion, and school size, as well as the amount of money schools were spending per subject. In mathematics, experts argued that "the ability to add at a speed of 65 combinations per minute, with an accuracy of 94 percent is as definite a specification as can be set up for any aspect of the work of the steel plant" (Callahan 81). Subsequently, these measures were implemented along with standards and scales of measurement to assess the skill levels of students through testing in all subjects, even in composition courses, although there were obvious difficulties there.

The "Platoon School" (Callahan 126), the twelve-month school plan (Callahan 127), the "Gary Plan" (Callahan 128) and the "factory school" (Callahan 126-142) model, which followed the design format of the school as a "plant," became so prevalent in the academic culture that the business centered values behind their construction would inspire the idea for kindergarten. Starting these methods at the earliest of levels would ensure that "even at a tender age, when the child is plastic in his nature, and easily

molded in any direction, he commences a training adapted to give him great skill in the use of his hands and eyes” (Button and Provenzo 176). The ideals espoused for the proper academic rearing of the child would extend the focus on “mechanical skill” (Button and Provenzo 176) to all grade levels.

Building upon this framework, SM came to be widely applied to school organizations and pedagogy. Harrington Emmerson, engineer and head of the Efficiency Division in the High Explosives Operating Division of Du Pont, (Stabile, 369) proposed the method by which SM could be applied to secondary schools with his 1912 essay titled: "Scientific Management and High School Efficiency" in 1912, followed by the publication of: “Scientific Management in Education,” by J. M. Rice, a physician and educator whose research brought about some of the first standardized tests. The metaphors guiding educational approaches adopted within these works include the "economy in education," "efficiency in education,” and "standardization in education" (Callahan, 23).

The industrial educational paradigm and the experiment from which the concept for Kindergarten would subsequently be adopted provides insight into the depth of the industrial intent as it came to be embedded within the construction of schools, their organization, administration and mechanistic methods of instruction throughout all K-12 levels. These successes also brought Taylor's theory to the attention of school administrators and public servants all over Europe, all of whom began to see the possibilities for greater efficiency in education. Detractors did emerge from the field of education to raise the alarm regarding the potential outcome of applying SM to schools and learning but in some cases, their research helped forward the mission.

## **Detractors Speak against the Industrialization of Education Movement**

Not all educators were swayed by the rhetoric of efficiency. William Torrey Harris, Saint Louis superintendent of schools, did not support this movement and expressed concerns that SM principles appear to ignore the acquisition of “intellectual possessions” in favor of the “training of the will into correct ‘habbits’...of regularity, punctuality, industry, cleanliness, self-control...and more efficiency in the well conducted” classroom (Button and Provenzo 176). Also, John Major Rice, a pediatrician who spent the period between 1888 and 1890 studying education and psychology in Germany, initially sought to change conditions he felt were degrading to the common man and actually manifest in abusive practices in the administration of public schools.

Rice was a staunch cynic who viewed the presence of industrialist practices as a negative influence. In fact, he committed an entire year of his life to conducting research for an exposé on what he saw as a broken system. This project took him to thirty-six cities to interview nearly twelve hundred teachers, parents, and students. He later published a series of articles on the state of education, between 1892 and 1893, in which he reported unacceptable conditions, disturbing attitudes among teachers and administrators, and destructive behaviors toward students. Rice also disapproved of the limited methodology that involved nothing more than “rote memorization and parroted answers” (Button and Provenzo 200).

Rice’s accounts are important in bringing attention to the early state of industrial education, but as a complicated figure his insights did not seem to translate to practice. Using his own observations, he would go on to become a major contributor to the mechanistic pedagogical movement as a pioneer in designing and administering

efficiency measures for schools, which that would result in the creation of the standardized tests. In 1911, the Committee on Tests and Standards of Efficiency in Schools and School Systems formed and extended Rice's research to the development of efficiency scales aimed at extending the reach of accountability standards across the board.

Today, some scholars recognized industrialization as an American phenomenon tantamount to a nation-building social movement designed to create an "urban-industrial society" (Meyer, et, al. 591), in part out of necessity but without the foresight to understand its long-term impact on the public school system. As such, scientific management based curriculum and instruction had the effect of creating a class of "subliterate" (Simon 77) students and even failed in achieving the industrial agenda in fundamental ways. During this period literacy rates dropped dramatically because academic study was not promoted or desired by industry. Simon also argues that education did not serve the economic interests of the country but was actually used as a tool of control over the "patterns of thought, sentiment and behavior of the working class" (Simon 77). She also notes that one serious consequence of industrial education is the alienation of youth, a sentiment that will be examined in John Dewey's scholarship in Chapter 2, which has given rise to delinquency.

Following the research of Bagley, Rice, and other scientific management strategists, standardization would reach across all disciplines, particularly, as it would apply to the measurement of performance and production through testing. However, it is not enough simply to associate testing with Rice without explaining the deeper implications of political rhetoric in reframing the public consciousness toward the



acceptance of increased standards in educational policy and for its power to perpetuate the crisis and reform narrative. This element is important to understand because, as the social mindset moves further toward standardization, education moves further into fragmentation in teaching and learning.

### **Deliberative Rhetoric in Shaping Educational Policy and Perpetuating the Crisis Narrative**

The historical launch of *Sputnik* in 1957 was an important event in two ways. First, it made more pronounced, the deep deficiencies already existent in the industrial educational framework by 1957 as a result of its abandonment of math and science as key subject areas of study, as William Bagley and others of his league recommended (Bagley *Classroom* 64). At the time, poor instruction received the blame, not the system or the curriculum. Second, this event speaks to the potential power of deliberative rhetoric in strengthening civic anxiety about education, particularly following exigent historical events in which education as a public policy is directly linked to national security and freedom. In general, the persuasive potential of political rhetoric associated with major events such as war is not always predictable but it does influence whether or not the public will support policies (Johansen and Joslyn 591).

Political rhetorical has historically capitalized upon the persuasive power of civic rhetoric in creating public support for their educational policy agendas (Johansen and Joslyn 591-592). Aristotle's definition of rhetoric offered an explanation for this impact in his view that rhetoric is simply an available means of persuasion, which locates its function "directly within the sphere of human history" (Farrell 324). Rhetoric speaks to the conditions of the time. Scholars have also employed questions of "place and

approach” (Asen 2) in rhetoric and public policy, contributing “sophisticated and trenchant analysis of important moments in U. S. and world history” (Asen 2), a matter well understood by President Eisenhower, for example. He understood and applied discourse supportive of his educational agenda following the launch of Sputnik during a time when there was grave public concern that the Soviet Union had outpaced the United States in technological superiority. Eisenhower recognized concern within the public and among intellectual elites in pushing Congress to pass the National Defense Education Act of 1958 (NDEA) (Graham 107), which declared: “The Congress finds that an educational emergency exists and requires action by the federal government. Assistance will come from Washington to help develop as rapidly as possible those skills essential to the national defense” (Graham 107).

The success of the Soviets in the launch of the satellite, Sputnik highlighted vulnerability in the perception of Americans; the Soviets had, after all, developed the technology to design, construct and position a satellite in earth’s orbit, a sign of imminent Soviet control and a threat to national security. At the time, the fact that the United States had no equivalent program created a situation that demanded an urgent response from the state to address perceived deficiencies in mathematics and science instruction (Graham 106). Senate majority leader Lyndon B. Johnson fueled the situation in stating, “Control of space means control of the world, far more certainly, far more totally than any control that has ever or could be achieved by weapons, or troops of occupation” (DeGroot 36).

There are two ways of examining the persuasive power of political rhetoric in creating public support of educational initiatives in this specific case. For the first time

since the early 1900's, there appeared to be focus on a restructuring of educational goals away from a practical skills orientation to align the learning continuum of public education to meet requirements needed for advancement into the sciences and technology. The government launched a major initiative, between 1954 and 1974, with a budget of \$134 million, to form a collaborative partnership between government and private foundations, such as the National Science Foundation (NSF) and the Ford Foundation. The goal had been to employ the capital and expertise of private foundations to fund an educational program in which scientists and mathematicians would develop curriculum for the training of teachers in summer institutes. The project engaged in a brief attempt to align the learning continuums of public schools with higher education but it quickly eroded when scientists and academicians lost interest amidst internal problems (Graham 106-107).

The public had expectations that this program would provide a plan for moving the United States ahead of the Soviet Union. Additionally, the project had already been funded and had to move forward despite the fact that key individuals who were supposed to construct solutions were no longer a part of the conversation. Their absence left an obvious gap in a program founded upon the promise that these experts would help make America competitive against the international community.

The program had to go on, but once scientists and academicians were gone, interventions were narrowed to the field of vision legislative policy could provide which resulted in bringing forth an even more stringent application of testing and regulatory policies, such as the "National Defense Education Act of 1958," (Graham 107) and the "Elementary and Secondary Education Act of 1965" (Graham 132), followed by the

“Education for All Handicapped Children Act of 1975” (Graham 149). Likewise, the public discussion about the adequacy of the American system of education prompted by the developmental phase of space program from the 1940’s to the late 1960’s brought about extensive public investments in education. This additional investment, along with a shift toward privatization of a substantial portion of NASA’s funding from the 1966 to the early 1980’s, signaled a turn in public and governmental interest in science and technology education. The attempt on the part of Ronald Reagan to eliminate the Department of Education, and his use of political persuasion to forward that agenda presents another side of deliberative rhetoric.

During the early 1980’s, Reagan commissioned a teacher and administrator from Philadelphia by the name of Milton Goldberg to conduct a study he hoped would result in findings that favored his agenda. Goldberg did release the report, which was entitled, “A Nation at Risk” (Graham 155; Porter 421), but his assessment of American student progress as substandard in term of academic achievement was unexpected. Goldberg was aware of the goal for the report and followed its release by stating that the United States as a country was “committing unilateral disarmament by failing to educate its children” (Graham 155), locating the problem with failing curriculum. By employing narratives of loyalty and security, he reversed the persuasive power of Reagan by relying on an “educated public” (Johansen and Joslyn 592) to reject propaganda claiming that the Department of Education should be disbanded by providing the public with the facts of the situation.

In each of these cases, there was a presentation of crisis and a subsequent deployment of rhetorical persuasion to rally public support for the associated political

agenda. The focus, however, remained on adding new regulations and generating new testing standards by which to assess learning deficits among schools working from production centered values and practices. Again, there would be no new reforms, but new metaphors that further limited educational policies and pedagogical methods would continue to be added. The system itself continued to function according to its industrial design.

### **Rhetoric of Crisis and Reform in Contemporary Contexts**

#### **Consequences of Social, Economic, and Political Focus on Testing**

Glaser and Silver argue for an examination of the “rhetoric of reform” (Glaser and Silver 393-394) so that the interest of individuals and groups that comprise the combined social, political and economic forces perpetuating the crisis and reform narrative may come to understand the consequences of the focus on standards with particular attention given to the measurements themselves. Specifically in regard to testing, they assert: “Testing and assessments, as they have been institutionalized in contemporary educational systems, represent the product of earnest attempts of prior generations to meet the conditions of earlier times. The conditions of today and tomorrow demand different measurements and educational solutions” (Gaser and Silver 394). In addition, in their very construction, standardized exams are deeply flawed.

Standardized tests are problematic not simply because they are a construction of the industrial educational paradigm that continues to guide educational policy but because tests are controversial in their application. They raise serious questions regarding their use and accuracy in measuring knowledge and assessing quality of instruction, so the appropriateness of relying on test scores as a class placement tool is at issue (Madaus

612). Further, they even fail in accurately gauging practical skills. What tests can measure is whether students have achieved mastery of the standards (Graham 187) in part because the individuals responsible for designing them brought unreliable and irrelevant qualifications and experiences. Nonacademic administrative officials who simply lacked the knowledge to identify true problems confronting schools, parents, and children controlled the process which did not include interviews with these key stakeholders. Even when such investigations were carried out, the results were rarely consulted for implementation purposes (Graham 141). Because of the connection to industrialization and the saturation of “rationality and efficiency” (Resnick 625) metaphors in the mindset of American culture, now focused on effectiveness and productivity, testing continues to be perceived as an indicator of performance (Resnick 625). While testing is another matter that is not specifically under view in this research, it is important in framing where the focus of American education resides while also establishing the origin of the testing model as well as those that have evolved from the industrialized educational system.

Some exams now used include the Scholastic Aptitude Test (SAT), the American College Test (ACT), and the National Assessment of Educational Progress (Loeb 2) among others. A Nation at Risk (Porter 421), actually set forth a curriculum outline that defines parameters for the number of years required for study in each of the subject matter (Porter 421) but it set no guidelines as to content. This lack of guidelines has presented states with the task of defining the meaning of academic performance and developing associated guidelines and measures that are unique to the parameters they set. Testing as a program, therefore creates a false assumptions from which public perception originate, that standardized means

standardization across some widely applied body of definitions when, in fact, metaphors guiding policy, curriculum and test design, are subject to overly broad, interpretation by individual state(Roderick, Jacob and Bryk 333-334).

The metaphor of achievement, for example, is best defined in terms of its counter metaphor: “underachievement” (Balduf 274). Again, its definition is loosely structured but based upon research conducted Reis and McCoach, a general understanding of the identity of underachievers might be as follows: “students who exhibit a severe discrepancy between expected achievement (as measured by standardized achievement test scores or cognitive or intellectual ability assessments) and actual achievement (as measured by class grades and teacher evaluations)” (Balduf 276).

Among the many other associated problems discussed here, testing as a system itself actually encourages abuse and is riddled with deficiencies at the programmatic level primarily because the testing environment can become a “coercive device that can influence testing and instruction” (Madaus 614). The result is “teaching to the test” (Graham 189) or curriculum based instruction (Sibley, Biwer and Hesch 1) which bases curriculum development on testing requirements. Exams are also inappropriately used to assess human abilities based upon theories that assume or explicitly describe what students can do and these assessments are then used to dictate selection and placement in academic programs without accounting for differences in human intelligence (Glaser & Simon, 394). Testing has become a “high stakes” (Roderick, Jacob and Bryk 333-354) contest shaped by social, economic, political and cultural influences. Perhaps one of the most significant factors the issue of testing raises is the fact that despite its long-standing

presence in the conversation about failures testing has not resolved the long-standing crisis in education.

### **Origin of the Disconnect Between K-12 and Higher Education**

It should be made clear that prior to the industrialization of education, there had been efforts to establish communication among primary, secondary and post-secondary institutions in developing a shared set of parameters by which to guide discourse about expectations and prerequisites. As early as 1878, there was already a serious disparity between the preparatory skills needed among college applicants and those with which students presented. At that time, college administrators focused on providing supplementary instruction and conditional entry. This did little to resolve the disparities between the secondary and post-secondary learning continuums, but the industrial educational paradigm, in its goal to move students toward an industrial life worsened the problem.

Several additional attempts were made prior to the industrialization movement to design a set of guidelines, including the conditional enrollment system, to accept underperforming students who were given the opportunity to accelerate to acceptable levels of achievement. “Regents” (Brubacher and Rudy 239) examinations were implemented in New York in combination with the development of a syllabus to guide secondary schools in developing college preparatory programming. Later, the introduction of the junior college served as a bridge between secondary learning and the university. Most of these interventions centered on examinations or some combination of proficiency demonstration but no truly helpful solutions were found that adequately



accounted for variations in program offerings between secondary schools and colleges, or skill levels among applicants (Brubacher *A History* 414).

Scholars and administrators within higher learning institutions across the country argue that these efforts have continued, even today, to include the development of college preparatory courses within universities. These programs provide “remedial education” programs (Attewell, et al. 886) to students who are lacking in fundamental knowledge areas and these kinds of course offerings continue to be added at an exponential rate. In fact, some question whether universities have already gone outside the scope of their duty in addressing problems that reside at the primary and secondary levels. The problem has reached the level of a phenomenon; practically all universities now have some category of “developmental education, skills courses, or college preparation courses” (Attewell, et al. 886). Contrary to implications of the rhetoric of crisis and reform narrative, research supports that current academic deficiencies reflect a long-standing problem that has not actually gotten any worse; performance just has not improved (Haycock 2). Universities are inheriting students who are emerging from the public school system with limited academic abilities and these institutions do what they can to address the disparities between expectations at the college level and the abilities with which students arrive, however, they are not structured to provide remedial instruction. Institutions of higher learning are designed according to a framework that suggests the start of the adult learning phase.

### **Application of Crisis and Reform Narrative in the Context of Higher Education**

Universities do have expectations for performance that have largely continued in the traditions of the first academies. These traditions make institutions of higher

learning best equipped to provide advanced level instruction for which preparatory training at lower levels is expected and necessary. Universities are not designed to offer remedial level courses (Roberts 95); they are, undoubtedly, embedded with traditions that underlie a philosophy of education, which assumes certain expectations as to what students should bring to the conversation. Students are assumed to have some basis in a prerequisite foundation.

Communication scholars, in particular, recognize the Ancient Greek design of the Quadrivium and Trivium as the foundation (Brubacher *A History* 244) for all education. The Greeks not only created the disciplinary structure of most subjects, but their approach is considered to be highly functional, known for its inclusiveness and balanced approach. No other individuals or institutions are viewed as having made this substantial an intellectual contribution in “subsequent educational history” (Brubacher *A History* 243).

Ancient Greek curriculum followed a learning continuum that mimics the pattern of the human maturity process, directing academic growth along a continuous evolutionary process so that people, as they became more accepting of adult responsibilities, would become more competent than the generations before them. Powers argues that Plato only accepted students at the point where they were “mature; when they had completed their preliminary education and were ready to embark on the extremely demanding but highly rewarding study of philosophy” (Power 157). For Plato, a rigorous philosophical education began with theory which he likened to the knowledge one possesses of one’s own soul (Power 158).

Harvard, and later Saint William and Mary College (Hawk 20), the first American colleges, honored the legacy of offering theoretically sound teachings, reflective of a Puritan desire to adhere to scholarly interpretations, and they worked to create as comprehensive an approach as possible with a mind to preserving the rigorous philosophical culture found in the tradition of academia. Throughout history and social unrest, the tradition upon which academia was founded continued to build upon a theoretical grounding in the rhetoric of the disciplines toward the lifelong pursuit of knowledge. Instruction retained ancient curriculum with relics of instruction in logic and the dialectic method as “the culmination of learning” (Hawk 19) in pedagogic practice just as it had during the Middle Ages. These are the foundations of higher education. Within this framework lies a fundamental difference in the manner of sustained administration and instruction that students receive as part of the learning continuum they follow in the higher education environment from that of the primary and secondary models. Primary and secondary school systems are not theoretically, operationally, socially, or culturally grounded in models similar to those of higher learning (Brubacher and Rudy 3-8; Button and Provenzo 2-5).

As the rhetoric of crisis and reform moves further toward the development of state performance accountability measures by which public colleges and universities may be scrutinized, the metaphors of efficiency, performance and production rooted in the achievement movement are driving licensure examinations, faculty development and budgeting for colleges and universities as well (McLendon, Hearn and Deaton 1). These efforts place the sovereignty so characteristic of the higher education structure at risk. The fact is that universities have a history of adapting to changes and responding to

market forces successfully without abandoning their core values (Trow 16) which a move toward further standardization places under threat. There remains, however, a relationship of regulatory influence within academia due to the number of students who receive financial support which naturally places public colleges and universities, in particular, at the center of the crisis and reform narrative.

### **Redirecting Education Toward Lifelong- Adult Focus**

One measure by which the academy might speak to growing academic deficiencies as problems higher education is not equipped to address adequately is by clearly articulating their core competencies so that schools might develop programs that align with college preparatory requirements and expectations by way of a clear set of guidelines from which the structure of a learning continuum might evolve. Research is supportive of a distinction between secondary and post-secondary educational systems as college and university demographics come to weigh more heavily in growing adult populations, a matter that clearly suggests the nature of a college education to be the territory of adult students. Adult education programs, which traditionally held a small presence in institutions of higher learning, continue to gain momentum in terms of matching the general population. During the 70's and 80, enrollments among 25 to 35-year olds increased by 77%; an exponential incline in comparison to previous years. Part-time tracks expanded and programs were geared toward actively seeking women and minority candidates (Trow 14).

Research also suggests that by the year 2007, roughly 44% of the undergraduate population was composed of students over age 24 despite the fact that policies and programs within institutions of higher learning continued to be structured toward the 18

to 21-year old, full time enrollee (Kazis, et al. 2). Market factors are highly influential in rising enrollments among older students with employment and earnings statistics indicating significant changes in educational requirements among at least 20 occupations with those same job categories expected to experience serious decline by the year 2014 (Kazis, et al. 4), according to the United States Bureau of Labor Statistics taken in 2005. Post-secondary institutions are under great pressure to accommodate these shifts leaving few resources to deal with increases in remedial student populations.

Quite simply, the “features” (Schuetz and Slowey 315) of non-traditional students are beginning to merge within the adult student category. For some time, research has shown that students do cross territory between traditional and nontraditional classifications. Many students follow a "winding path" (Schuetz and Slowey 315) described as the "educational biography" that follows the person's life-cycle. Factors such as access to higher education, cost and other associated factors, influence the time concentration student can commit, whether that be part-time or full-time, or when the student tackles other major life commitments such as having a family while studying (Schuetz and Slowey 315). Since the 1980s, communication scholars have recognized that adult student enrollments have been increasing in conjunction with changes or demands of social forces, such as job changes (Berryman-Fink 157).

### **Summary**

This project seeks to articulate the complex nature of the rhetoric of crisis and reform narrative by framing the historical social, political, and economic influences behind the construction of a mass system of public education. Specifically, this research

asserts that the industrial educational paradigm shifted the aim of education further away from knowledge by limiting mass public education to what would be practical and useful for the transition to an industrial life, and it did so through the language of crisis. This work also asserts that the practices born of that era have not undergone any major reform yet the crisis and reform narrative continues to guide the conversation. As a result, four primary areas of concern arise in the rhetorical engagement of the education “crisis” that stem from a misalignment in perceptions as to what education ought to do; the origin of the efficiency and effectiveness metaphors of industrialism and the turn away from knowledge as the basis of the accountability and assessments movement; the continued influence of social, political and economic forces derivative of industrialism as a limiting force in the development of policy and pedagogy; the continued use of the industrial crisis concentration in the rhetorical engagement of education discourse; and the appropriateness of applying legislative, policy and administrative policies born of these influences to higher education.

Throughout the remaining chapters, this work will proceed by tracing the communicative threads of industrial metaphors of production as an educational paradigm that continues to guide scholarship and teaching. Chapter 2 will examine the philosophical orientations of pedagogy and andragogy to identify the presence of the industrial educational model of production in its turn away from knowledge and meaning.

## **Chapter 2**

### **Philosophical Orientations in Andragogy & Pedagogy**

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#### **Pedagogical Foundations**

##### **Pedagogy and the Basis for Andragogy**

The industrial educational paradigm has had a profound impact not only in the conceptualization for a mass system of public education but as a formative influence in its broad application to educational policy, curriculum and pedagogy. It is the origin of the ongoing rhetoric of crisis and reform narrative in contemporary discourse about education, and the continued presence of scientific management principles can be found in the organizational structure, administrative framework and pedagogical theories guiding contemporary education.

This situation presents the fields of research and teaching with several issues. Because the aims defining education's purpose, shaped according to the great rhetorical challenges and opportunities of a past era, have become so deeply embedded in the crisis and reform narrative, pedagogy has struggled to break free of the rhetoric of production framework guiding its contemporary design, and with good reason. Restructuring an entire body of scholarship that has been in place for decades would be a difficult project at best, but more likely impossible in light of the fact that scientific management principles are embodied within the entire social, political and economic consciousness, or the "bloodstream," of American culture (Callahan 5). Every function of life and learning has been equated with the corporation, forcing a shift away from traditional models of learning to "utilitarian" (Callahan 9) approaches that consist of fragmented learning of processes, void of meaning. The scientific management educational model of efficiency,

directed learning toward SM methodologies rather than theory and toward a philosophy of education based in pragmatic principles of usefulness (Dewey 17), rather than knowledge.

Throughout this chapter, the instructional content of pedagogy will not be the focus as much as the manner in which theories have been oriented by the underlying philosophical orientation of the field. Therefore, in explaining the origin and guiding philosophies of pedagogy, andragogy, critical theories of education and phenomenography, there will be a concentration on whether practices are philosophically grounded in knowledge aims accompanied by an examination of whether theories consider the role of meaning and experience in learning strategies. A major tenet of this project is founded upon Plato's assertion that "defects of intelligence" (*Phaedrus* 18) arise from ignorance, which can be an acquired or innate state arising from deference to standards of conduct toward pleasure rather than knowledge. Regardless as to the reason why one becomes bound within the limitations of ignorance, one must try to increase one's wisdom or risk sustaining "the greatest harm" (*Phaedrus* 19), which is the lack of intelligence.

Plato outlines a system of ethics in education in which he argued that wisdom and knowledge are of the divine (*Phaedrus* 18, 30 ), and both are manifest of truth where reality resides. Further, reason, as the "soul's pilot" (*Phaedrus* 30), is the embodiment of all true knowledge, and the very possibility of knowledge is a faculty of understanding that can be sustained only where one has experienced "direct and pure knowledge" (*Phaedrus* 30), which is a knowledge of the soul, or the "intellect" (Brubacher 243). Prior to one's entrance to earth, while one is still in the company of the divine, one is in



the immediate experience of truth and knowledge. Upon one's journey into reality, one must continue on this path until such time when one is once again in the company of pure knowledge, when one returns home.

Upon this basis, this project approaches education as a matter of ethics and in so doing, bases the assertion that knowledge should be the true aim of learning upon the idea that this lifelong pursuit is one upon which every person must embark as a unifying principle. However, as stated in the previous chapter, this work also recognizes that all aims toward knowledge, which Aristotle defines as "the supreme good" (*Nicomachean* 1094a-ii2), do attend to the practical needs of life. In moving from an ethical rhetorical model in evaluating pedagogy, andragogy, critical theories, and phenomenography, Plato's outline for an ethical education becomes critical for evaluating the philosophical orientation of scholarship and teaching, particularly following the turn away from knowledge and theory as part of the industrial educational paradigm.

### **Scientific Management & Pragmatism: Evolution of the Mechanistic Pedagogical Moment**

The most "powerful academic philosophy" (Campbell 2) of all American history is pragmatism, which, like phenomenology, was a response to empiricism (Rosenthal and Bourgeois 56). Pragmatism evolved as part of the progressive movement, and it served to provide a philosophical basis for the application of scientific management principles to education. Generally, it embodies a set of ideals by which the industrialized model of education, separated from tradition, might address the exigencies of industrialization, under the premise that "dealing with matters with regard to their practical requirements and consequences" (Omerod 894) is a valid solution. As a philosophy guiding the

industrial intent, pragmatism would enjoy a “golden age” which lasted between the periods of 1889 to 1952.

Various interpretations of pragmatism followed its development, most commonly linked to the “ethical philosophy” (Caldwell 484) of William James, whose 1898 public address at Berkeley, “Philosophical Conceptions and Practical Results” (Caldwell 434; Omerod 893), is thought to be the first formal piece of literature outlining the approach. James’s body of scholarship can be summarized as a pragmatic approach to truth based in his notion that humans are compelled to believe things to hold truth based upon their own reality. He later developed his ideas further in his book: *Pragmatism*, published in 1907. Campbell believes a base of scholarship was already in existence prior to James’s research, but due to a lack of documentation, identifying the origin of pragmatism’s inception is difficult. In addition to James, he also points to the Metaphysical Club of Cambridge, 1870; Charles Sanders Pierce, John Dewey and the Chicago School in operation between the years 1894 and 1904 (Campbell 1), for their substantial contribution to the body of scholarship behind the philosophy.

R. Omerod, University of Warwick, Coventry, UK, defines pragmatism as “a philosophical doctrine that can be traced back to the academic skeptics of classical antiquity who denied the possibility of achieving authentic knowledge regarding the real truth” (892). Absent the possibility of real truth, society can only identify “plausible information” (892) adequate to meet the needs of practice at any given time. Omerod also refers to the influences that have contributed to the development of pragmatic thought as originating from Kant’s (1724-1804) pragmatic belief, Schopenhauer’s (1788-1860) notion of an intellect that is subordinate to the will, and utilitarianism and the

“rightness of modes of action in terms of their capacity to provide the greatest good of the greatest number” (892). Charles Saunders Peirce (1839-1914) is also recognized for his pragmatic philosophy of meaning rooted in concepts that have application to real world relationships based upon observable results defined by experiential conditions.

In terms of defining the tenets behind pragmatism as it is applied in American scholarship, John Dewey’s contribution is regarded as most formative. A fundamental belief from which Dewey moved resides in his assumption that there must be a self-correcting process by which norms and procedures are evaluated and revised in light of subsequent experience (Omerod 893), a premise challenged by the continued presence of practices that have remained largely unchanged since industrialization and the ongoing crisis and reform concentration in educational discourse.

Dewey, recognizing this possibility in the limitations of the philosophy, held grave concerns about the application of pragmatism to the knowledge enterprise, particularly where the means employed to achieve the end desired result in some form of “absolutistic ethics” through the universal goal of progress (Diggins 905), which becomes the foundation. This concern is based in part on Dewey’s beliefs about fast-changing intellectual patterns in general, or shifting paradigms that occur within major historical or scientific movements. Paradigm shifts in general are assumed to be accompanied by difficulties where they seek to interpret and explain changes within the environment at the time they are adopted. The weakness of all paradigms is the flaw of pragmatism in that it failed to anticipate future consequences of applying the “whatever proves to be useful” (Diggins *The Promise* 2-3) philosophy to education. As the entire communicative structure of the industrial educational paradigm was built upon a platform

of a practical skills based education, not aimed toward knowledge but an industrial life, Dewey's concerns had no bearing on the enterprise.

Just as Dewey foresaw, the industrial intent would not simply impact the rhetorical moment in which it was formed; its impact would ultimately hold dualistic consequences for the education of the mind and the spirit. While Callahan describes this time as a period in which the story of opportunity at the center of the American ideals was lost (1), Dewey saw a future in which the desire to control nature at the expense of meaning, of knowing the good, brought a state of isolation for the student; the plight of "modern man" (Diggins *The Promise* 6). This alienation would become descriptive of the common educational experience of the student now situated within an environment ruled by mechanistic pedagogical strategies originating from the unification of pragmatism with the methodology of scientific management.

Despite Dewey's own concerns, ironically, the principle of usefulness would be applied to his own research, as only what would be useful in forwarding the initiatives of industrialized education was extracted from his philosophies. Pragmatic philosophies applied to education articulated a communicative framework for negotiating pedagogical strategies that are not theoretically grounded but would center educational discourse and learning outcomes on the functional and "practical" (Ormerod 894). However, this aim is not in keeping with what Dewey desired and expressed in his writings.

In reality, two fundamental principles guided the industrial educational interpretation of pragmatism: the rejection of all "correspondence theories of truth, objectivity, and knowledge" (Stecker 181) and rhetorical consensus as the determinant of truth, objectivity and knowledge as agreed upon by a community, or business leaders of

industry as the recognized leaders of the community during the early 1900's. The industrial educational paradigm applied pragmatism in a particular way that was supportive of the turn away from theory, knowledge, and experience in contrast to what Dewey embraced, thereby setting a course that would hold long-term impact in shaping adult and child centered methodologies.

### **Shifting Patterns in Adult-Based and Child-Centered Education**

Situated historically along the timeline of the industrial educational paradigm, pragmatic philosophies provided the intellectual fuel to define a Good, a good that would be adequate to meet the circumstances of the moment. During the early 1900's the idea of an industrialized education was based in a desire for economic advantage for business leaders, which pushed forward a different "intentionality" (Vanderstraeten and Biestra 161) for school that is publicly funded, formalized, and standardized, which took teaching out of the realm of the family based setting to a series of physical locations. As Chapter 1 detailed, the campaign of rhetorical persuasion designed to push the industrial agenda reframed the holistic idea of learning to a more "systematic awareness of the possibility of education" (Vanderstraeten and Biestra 161) in an artificial setting. Along with the physical locality of school as institutionalized, the very role of schools evolved as well. More children were literally growing up within the school environment, spending more hours there physically, while becoming more emotionally reliant on the social aspect of school for personal and intellectual development.

Public discourse eventually did engage the idea of a child life separate from an adult world, and a direct consequence of this coming into recognition was that the child was simply not the same sort of human being as an adult; children live and learn in a

particular way, as recognized by Dewey. Understanding the differences between child and adult learners, Dewey identified a “gulf between the mature or adult products and the experience and abilities of the young” (19). Because child or pedagogical theories were constructed from adult based programs, he believed the progressive movement failed to account for the normal, slow growth of children who were forced into standards, subject matter and methods they were not prepared to handle. He felt this space of awareness to be wide enough that young students would be prohibited from any active participation in the experience. It is here where one of the most salient features of Dewey’s approach differs from the industrial educational model.

The inability to conceptualize fully an educational philosophy appropriate for children, according to Vanderstraeten and Biesta, stems from individualism born of the Enlightenment era in general, which placed the theoretical and philosophical orientation toward resolving issues and problems on a subject-centered track sparking a change in the intellectual context in which expectations for education are bred. Education and theory today are simply reflective of that reorientation (163); the mechanization of society naturally evolved to the mechanization of the child and the child’s school life.

In his 1938 publication, *Experience & Education*, Dewey spoke of the “subject-centered track” (Vanderstraeten and Biestra 163), arguing that the “subject matter of education” (17) came to fragment learning into “bodies of information and skills that have been worked out in the past” (17), with the mission of simply transmitting data to students. He asserted that the child should participate in the very development of what is taught; moving within a doing is learning ideology. What he saw in actuality was an

approach that views the child as external to the learning encounter, merely acquiring what is already incorporated into the books and the minds of their elders.

Dewey described the relationship between teachers and students as patterned according to an organizational model that turns schools into institutions controlled by “time-schedule, schemes of classification, of examination and promotion, (and) of rules of order” (18). He was also concerned with the notion of fixed knowledge, or teaching as though the information is a “finished product” (19) that will remain the same across time, unreflective of changes that occur in the future. Dewey very aptly stated that it is a cultural product of society to assume that the future will look just the same, moving from the same motivational intent as the past. Quite to the contrary, he described learning as educational food that provides sustenance to a society with the element of change as a certainty, not an exception (19). Dewey saw schools born of this movement as nothing more than systems in which the characteristic of this structure is the standardization of rules, conduct, and habits of action that demand conformity.

One of Dewey’s deepest concerns was that students who become embedded into this kind of a system will become “bereft of spirit” (Diggins 3-4), the fate of every man who is embedded in the modern enterprise. Ultimately, as Dewey predicted, industrialized teaching practices adopted as part of the mechanization movement would leave students in a state of existential, “cosmic loneliness” (Diggins 3), functioning daily within institutions that do not recognize or value meaningfulness in learning. Diggins might have foreseen that children would come to experience the world through a process oriented, institutional framework (Dewey 5-6) that seeks to quantify knowledge

and man's relationship to the world according to material qualities (Rosenthal and Bourgeois 57).

Even though the public school movement was in part a necessity, education as a public good provided opportunities for children to escape the bonds of unfair labor practices but lost sight of the empirical realities of the systematic approach Dewey, and Vanderstraeten and Biesta describe. What is more, these issues were intentionally diminished by language representative of the philosophical orientation toward efficiency. The important question of how education might be possible under the weight of society's problems but with a mind toward the future was marginalized in order that the turn away from traditional learning based in theory might be moved to progressive educational methodologies (Dewey 17) or "new educational realities" (Vanderstraeten and Biesta 161).

However, a dichotomy grew out of the rhetoric of crisis and reform campaign of persuasion that discouraged college, an unintended consequence that would result from the expansion of schools. Contrary to its design, it actually increased the need for higher education. More children in the system meant the need for individuals who possessed the specialized training necessary to occupy teaching roles. What had been an elite system of education for the wealthy now moved to the idea of a mass system of higher education. By the early 1920's adult learning theories were in demand (Rachal 210), and while they were newly examined in terms of adult demographics, they were largely constructed from the same mechanized framework guided by scientific management metaphors.



## **Andragogical Foundations of Adult Learning Theories**

### **The Emergent Need for Adult Education Theories**

The demand for adult education raised the question: What is the adult student and how is he distinguished from the child? This is a question that would form early research into a new class of adult learning theories. The term “andragogy,” also referred to as “lifelong learning” (Davenport and Davenport 153), so evolved. Dating back to the work of a German educator, Alexander Kapp, who originally applied the term in 1833, andragogy was used to describe the educational theory of Plato. Unfortunately, a disagreement between Kapp and his colleague, John Frederick Herbart, who opposed the use of the concept to describe adult education, prevented the term from receiving recognition until 1921, when the concept was revitalized in Europe. However, until Knowles’s research, andragogy remained an undeveloped idea. Knowles’s work is viewed as having defined andragogy as the art and science of helping adults learn; however, his road to finding ground for andragogy in adult education was not immediate. He was initially unaware of the term and, in fact, it was his own realization that a specific term describing adult learning theories was required that led him to its discovery (Davenport and Davenport 152).

Following a stint as director of adult education at the Huntington Avenue YMCA, Knowles began to develop greater insight into what makes teachers successful in attracting, retaining and educating adult students. Knowles, realizing that most scholarship referring to adult students was anecdotal rather than systematic in the principles and guidelines applied to teaching, sought to initiate a dialogue about how adults actually learn rather than how students react to teaching grounded in pedagogical

theories. He consulted the work of Cyril Houle, who was actively researching people who engage in "continuing," or "systematic" (*Andragogy* 5), study to determine how they approach learning, and that of Allen Trough, who was also examining the "internal dynamics of learning in adults" (*Andragogy* 5).

Knowles became a direct participant in the National Training Laboratories (NTL) Institute of Behavior Sciences in Bethel, Maine where he observed first-hand some of the circumstances that influence the learning experience of the adult student. Between 1960 and 1970, his research turned to examining the categories distinguishing adult learning theories from traditional pedagogical models with a distinctly communicative concentration on language and experience. One of the first issues Knowles raises is that the term pedagogy stems from a combination of Greek words: "*paid*," which means "child" and "*agoros*," translates to "leader of" (Knowles 6). Therefore, the term pedagogy means "the art and science of teaching children" (Knowles 6).

According to these definitions, pedagogy is not a term that applies to the learning experience of a student who reaches higher education at the age of eighteen; rather at the university level both pedagogy and andragogy will more than likely intersect, a practice Knowles applied. He believe it was more appropriate to engage andragogy and pedagogy by applying both theories to the learning continuum from childhood to adult life, even penning an article titled, "From Pedagogy to Andragogy" (Davenport and Davenport 155), where he asserted the strengths of engaging both theories in concert. An important tenet of this project is founded upon a notion of learning that follows a continuum which reaches the level of adult learning once a student enters higher education.

The notion that learning occurs in phases associated, in part, with the progression of grade levels from primary to secondary to post-secondary school, can be viewed as a response to the rhetoric of crisis and reform narrative for two primary reasons. First, as the accountability and assessment movement born of the industrial production ideal as examined in the previous chapter, shifts further toward colleges and universities in the attempt to apply standards for measuring academic success, there is a need for clarification as to the role and responsibilities of the university. Second, by clearly articulating where higher education falls on the lifelong learning continuum, a body of prerequisites and a clear set of parameters might be constructed that may enable schools to better align college preparatory programming to the expectations of universities.

### **Phenomenology, Pragmatism, and Industrialism in Adult Learning Theories**

In comparing the philosophies of pragmatism as the philosophical orientation of the industrial educational paradigm and the subsequent evolution of adult learning theories, pragmatism's relationship to phenomenology becomes important. Both pragmatism and phenomenology evolved in answer to empiricism, but they part where questions of meaning and knowledge are concerned. Aikin describes a dichotomy that exists in pragmatism's commitment to naturalism in contrast to phenomenology's "overt anti-naturalism" (317) as the fundamental basis for their division.

Pragmatism and phenomenology have distinctive scientific methodology; both are seeking a return to lived experience. Scientific management had the effect of obscuring this ideal because it applied pragmatic philosophies through the lens of a "mechanistic universe"(Rosenthal and Bourgeois 56). This worldview interprets knowledge as a

science of dualism that rejects any notion that there are “mentalistic” (Rosenthal and Bourgeois 57) aspects of knowledge that places man “within nature” (Rosenthal and Bourgeois 59); according to pragmatist philosophies, the human being is not causally linked to nature. According to this view, “man does not perceive mental contents somehow caused by physical qualities” (Rosenthal and Bourgeois 57) and does not engage in an inner introspective activity from which some hidden meaning arrives from outside. Knowledge appears to be a robotic function of the processes by which information is accumulated.

Phenomenology rejects “natural,” “empirical,” or “scientific psychology” (Rosenthal and Bourgeois 57), also born of the empirical scientific methodology with which pragmatism is often confused. Rosenthal and Bourgeois argue: “The rejection of natural or scientific empirical methodology for phenomenology is the rejection of attempts to explain knowledge and man's relation to the world in causal terms of material qualities and mental contents or in terms of “mechanical stimulus-response operations” (57).

While pragmatism does accept the natural scientific methodology in directing educational approaches, it is primarily concerned with the student’s actions: what he does, rather than the findings that result or the internal process of interpretation and understanding that follows. Pragmatism does not view knowledge as dependent upon some predetermined properties of a fixed and antecedent reality, or a tradition that defines it and requires that it disclose itself according to those measures in order for knowledge to be. Knowledge is something that can be recognized and interpreted in the present as part of the process of scientific inquiry (Rosenthal and Bourgeois 57). The

focus is on how the human being deals with the lived experience, which is a naturalistic view of thought that is not grounded by “foundationalism, coherentism, internalism, externalism, or other” (Aiken 318) internal thought processes or external influences such as tradition; it is restricted by an “a-priori justification or thought-experiment” (Aiken 318).

Scientific methodology perceives the relevance of the lived experience only within the experience of the student and not on the observations that result from the student’s findings that potentially make the student “the active, creative agent” for whom meaning serves as the very structure upon which knowledge builds (Rosenthal and Bourgeois 57-58). In other words, the student actively engages in structuring lived experiences in whatever way that will achieve a desired outcome; the student is not experiencing what is already there, or allowing that thing to present itself which inhibits responsiveness to the environment. The pragmatist wants to return to lived experience as that which grounds both scientific meanings and the abstractions of those meanings rather than rely upon scientific findings to provide a causal account of human knowledge of the world. And, even though pragmatism theoretically rejects science as the way to explain all there is to conceive about knowledge, a pragmatist still moves from a belief in the scientific method as the model by which all cognitive activity can be understood and upon which human creativity is founded.

Phenomenologists see the concentration on objectivity that dominates education and the meaning of science as a condition of the modern world where what is “scientifically ‘true’” (Husserl 127) is the objective view thought of as nature. In contrast, a phenomenological approach to education does not view the lifeworld through

objectivity, which is founded upon a “theoretical-logical” interpretation that argues things are not “experienceable in their own proper being” (Husserl 127). (Because the industrial education model removed theory as foundational; even the objective view of science could not properly achieve its own aims). Conversely, in the subjective mode of the lifeworld, the student is situated within original self-evidentiary experiences, perceiving things as “the thing itself” (Husserl 128) either in the present moment or in the “background experiential horizon” (Steeves 21) of memory that is retained and can be recalled later. Within these regions of experience, the student is actively learning through perception.

While Knowles distanced himself from the outcomes of industrialization in education in describing the environment of the modern classroom, his theories, as well as others inspired by his work, incorporate performance based metaphors, while also applying some principles characteristic of phenomenology. He followed a distinctly organizational approach, referring to the responsibility of learning in the context of independence, self-direction and problem-solving in a pragmatic sense. But the influence of phenomenology is notable in Knowles’s commitment to the “accumulation of life experiences” as a “rich resource for learning” (Merriam 5).

Elements of phenomenology, pragmatism’s practical philosophy, and principles of scientific management are found throughout his scholarship, wherein metaphors rooted in achievement and assessment are prevalent. Merriam’s communication-centered definition of adult learning associated learning with “changing social roles;” and “problem-centered” communicative strategies that evolves from an interest in the

“immediate application of knowledge” (5) that stems from internal rather than external motivations. Rachal also locates references to learning as a “contract” (211).

Remnants of the “end to education” (Bagley, *Educative* 40) argument raised by William Bagley are found in adult learning scholarship, a matter addressed across disciplinary centers in behavior, psychological and social sciences, all of which have analyzed this question from varied perspectives, relative to the field of inquiry, with findings shaped accordingly. Taylor’s time studies are easily identifiable in this research that assesses adult learners according to factors such as intelligence, rate of speed at which learning happens and problem-solving. Merriam also notes the “teaching-learning” situational approach that focuses on goals, “techniques” (6) of learning and the structure of a teacher/student relationship. The scientific management (SM) connection is most deeply recognizable in the organizational and organizational behavioral concentrations as described below.

### **Organizational Learning Theories**

As adult education evolved as a discipline, scholarship moved further to organizational models of learning and application, adding two bodies of theories, Self Directed Learning (SDL) and heutagogy. Knowles lent voice directly to the development of SDL in his search to discover how individuals in organizations may be helped in the process of becoming self-directed toward the elimination of the communicative interaction between teacher and student; a difficult task particularly when students expect to be taught. Knowles addressed the needs of the learner and the employer and management as the trainer who designed programs specifically to assist employees in the transition to independent study (96).

Self-Directed Learning (SDL) generally considers functions and processes that are self-directed toward certain achievements, addressing learning in the context of the goals, the process, and the learner,” (Merriam 8-9). The dialogic nature of learning is not a desired outcome of the process because the relationship between the learner and instructor is one that can have a positive effect where help is offered and appropriate or negative in the sense that the teacher can be viewed as a hindrance the development of the student. Instructors are expected to provide students only with the degree of intervention necessary to move that student forward in his or her own learning process. Although SDL embraces a process approach to learning, Knowles departed from the idea that individuals must be prompted to learn or given incentives as motivation. He believed that students, specifically adults, possess a personal desire to direct their own learning and can engage in self-directed learning because it is a normal function of maturity (96). Knowles also believed that even adult students have to be allowed to progress toward independent study.

Heutagogy theories examine organizational learning from a communicative perspective unifying both andragogy and pedagogy, where some unique elements practices and principles are united in providing training for the learner who is later assessed for personal agency, and general “competence” (Hase and Kenyon 13), but students are also expected to apply knowledge in solving problems while also collaborating in interactive group settings. The philosophical framework for heutagogy theories is the idea of the “emergent nature of learning” (114) where the curriculum is considered to be “living” and situational and collaborative yet independent.



Organizational theories of education are largely found in some combination with andragogy and pedagogy courses designed for adult students. Another body of scholarship that can be viewed as a response to the industrial incentive approach consists of critical theories.

### **Critical Theories of Adult Education**

Critical theories are said to have made the most significant contribution to adult education scholarship and teaching, evidenced by their wide application to higher learning and organizational training, and may be viewed as a response to the industrialized educational movement. Brookfield notes that the fundamental aim of critical theory as an intellectual tradition is to examine power in relationships, and as such, it is an outgrowth of the Frankfurt School of thought found primarily in the works of Fromm, Horkheimer, Marx and later, Mezirow. He refers to Marx as “the most towering intellectual figure...for writers who fall into the category of what most people now call critical theory” (Brookfield “*Repositioning*” 8). In positioning critical theories in the context of others, Brookfield finds that Horkheimer’s essay “Traditional and Critical Theory” (Brookfield “*Repositioning*” 10) remains the most “pertinent” in distinguishing its characteristic differences as well as its similarities, particularly to traditional (positivist) theory. While Brookfield outlines five distinguishing ways in which critical theory departs from other “traditional theories (Brookfield “*Repositioning*” 12), he narrows its scope to the examination of conflicting social-economic relationships between social classes.

Although scholars working within the critical theory classification address the underlying metaphor of power in education, Marx’s focus on power has been most

influential in the areas of false consciousness, commodification, alienation, praxis, and emancipation (Brookfield, 8). Brookfield speaks of the irony of the “marxophobia” (8) complex in American adult education that reacts to the notion of Marx through narratives of nationalist loyalties that depict practitioners and theorists as “un-American” (9) at the mere mention of him. Although the root of industrialized education is characterized by scientific management metaphors of production and efficiency that have standardized and centralized organizational structure of schools, businesses, and government, the same markers incorrectly associated with Marx are denounced as state socialism. Brookfield asserts that misrepresentations in interpretations of Marx’s ideas prevent critical theories of adult learning from properly recognizing the centrality of his concepts to the development of the field of critical theory.

Jack Mezirow, Professor of Higher and Adult Education at Columbia University, addressed power within the self as the primary critical theory metaphor in applying a *Habermasean Model of Critical Theory of Adult Education*. Power generated from within the self yields an emancipatory action and a transformative power born of self-interest and does not require external interventions. Three generic categories of human experience, “knowledge constitutive,” (3) our interpretation of what is knowledge and what claims of knowledge are credible, work as an “instrumental action” (4) viewed in terms of the way in which one “controls and manipulates one’s environment. “Interaction” (4), is a practical communicative action that brings about a type of knowledge. Power is an emancipatory “knowledge of self-reflection” that enables a historical and biographical view of the self from the perspective of the roles and social expectations (5).

## **Hidden Discourses in Value Judgments: Who Should Be Educated?**

Critical theories also deal with hidden discourses about value based judgments, which inform policy determinations. Industrialized education was constructed to achieve a particular outcome through the lens of value. The industrialized model was meant to prepare individuals in mass, for an industrial life. Here education, at that time, was not deemed to be a good for all, as discussed in the Chapter 1. Whether a university education should be available to all or to the few is not a public conversation, but rather speaks to an underlying set of attitudes and beliefs about access to higher education stemming from a very basic ends/means valuation. Communication and lifelong learning scholar Barbara Lieb-Brilhart argues that questions stemming from equality based philosophy are really engaging in a discourse about goals, or whether education should steer toward the immediate or the long-term. Where learning is seen as a means toward improving the quality of life and society beyond primary, secondary or post-secondary school years, it is considered to be a lifelong value (Lieb-Brilhart 143).

If education's purpose is an end, its value is limited to what can be immediately measured. It is not a lack of concern for the long-term significance of learning that guides this kind of goal orientation; this is the place of policy which guides administration and pedagogical design toward ends-based methods. Schools are not able to focus on lifelong learning because their attention is focused on legislatively based benchmarking standards, and guidelines for achievement, accountability and assessments. The measures themselves aim curriculum toward short-term objectives that are evaluated through extensive testing throughout grades

K-12 (Helterbran 261), and they limit the learning continuum to the arbitrary ends of testing rather than knowledge. Scholars, institutions of higher learning, and political and administrative leaders may be further bound by the means/ends approach in higher education. Ultimately, critical theory arguments suggest that hidden discourses set the “conditions for the acquisition of knowledge” (Wahlstrom 432). Viewed in terms of power, educational policy limits school in their ability to structure learning toward knowledge in a programmatic fashion.

Wahlstrom’s critical theory analysis of means/ends valuations consider how hegemonic relationships between people divide access to knowledge according to who should receive it and how. Where knowledge for the few is specialized, it is “of the powerful” or is in itself “powerful” (432) and can only be obtained through institutions and individuals with the appropriate credentials and training. It is assumed that powerful knowledge is the ideal for what it “can do” (432) in forming a deeper understanding of the world. Brubacher asserts that the "Who should go to college?" (*Bases 1*) question is a point of entrance that defers to all other concerns, particularly in determining how far to extend the boundaries of responsibility for college entrance and pedagogical practices. Tradition supports higher education for the few in order that the highest levels of intellectual concentration may be preserved, based upon the belief that mass education would have the effect of lowering standards (*Bases 4*).

Everyday knowledge, or the practical, is generated through different access points, arises from varied forms of actions, and occurs in everyday encounters and experiences, not just in formal settings. Wahlstrom asserts that education and schools should be situated within the higher-order knowledge category (433), which Barbara

Lieb-Brilhart associates with the precepts of lifelong learning (143) and Helterbran also supports in moving from “school-long” (262) learning to “lifelong learning. ”

Perhaps the most powerful body of work in the critical theory genre of pedagogy, also applied to andragogy, is Paule Freire’s *Pedagogy of the Oppressed*, in which he makes startling comparisons between social-economic concepts, such as: “banking” (72) as an instrument of oppression and “narration sickness” (71), which refers to rote memorization of facts poured in the brain of the student by the educator, rather than a dynamic, communicative exchange relationship between teacher and student.

His notion of banking is particularly apropos to the underlying argument of this research that the mechanistic pedagogical methods followed from K-12 follows a divergent learning continuum from that of higher education, which results in a difficult transition for students who enter college without the necessary prerequisites. Short-ended, production based standards of assessment and achievement limit students in the “scope” (Freire 72) of action to what they can receive, store and later deposit on standardized exams. As “collectors or cataloguers,” they learn only processes, fragmented from the subject-matter, as detailed in the analysis of Dewey in the previous section, and out of the context of the story of the discipline. One idea has no relationship to the next or the one before. Learning of this nature not only is lacking in creativity. It is not transformative in terms of enabling the student to become an independent learning and it also lacks any concentration on the pursuit of knowledge (Freire 71-72).

## **Phenomenological Theories of Adult Education**

Phenomenography provides an important framework for understanding the role of meaning and experience in learning, unifying aspects of pedagogy, andragogy and critical theories. A key feature of phenomenography is found in its quantitative/qualitative balance through the incorporation of both “empirical” (Greasley and Ashworth 819) and qualitative components. It is best described as “a qualitative methodology in which each particular study focuses on a concept, entity, or situation and tries to map the various ways in which that thing is construed (‘experienced, conceptualized, understood, perceived and apprehended’) by people” (Greasley and Ashworth 819). The scope of the research can be understood to “aim to discover and classify people’s conceptions of reality” (Greasley and Ashworth 819), which, as Plato suggests, is actually a pursuit of truth - a pursuit of knowledge.

Historically, the phenomenological theories of Husserl (Ashworth and Greasley 561) are thought to be most formative in the development of phenomenography, although Sonnemann first identified and later classified the term as descriptive of the direction Jaspers and Heidegger followed in their theoretical approach. Marton actually identified the term and discovered the possibility for pedagogical research addressing how each experience varies within the perspective of the learner (Dahlin 401). Säljö is also considered to be the source for developing phenomenographic references to an individual’s, self-motivated intention to learn, while forming key ideas related to the student’s approach to the process.

Fundamentally, phenomenography is concerned with how the student approaches learning. Whether the experience is considered to be “deep” or “surface” (Ashworth and

Greasley 561), learning has to do with the meaning a student derives from the encounter. A criticism of phenomenography, like that of andragogy and pedagogy based theories, is that it is too focused on “noesis” (Ashworth and Greasley 561), mental activity or process, or “noema” (Ashworth and Greasley 561) which is meaning, a point that also concerned Husserl. Both of these concepts are important to this research, which argues that the industrialized systems approach to education is too focused on process and is devoid of meaningfulness in the learning experience.

The Husserlian concept of “noesis” (Ashworth and Greasley 561-562) examines “the manner of mental activity” (Ashworth and Greasley 561-562) and is a process orientation applied to learning material. What is missed is an investigation into what the material actually means if the subject and the object are seen as having a relationship one to another, the concern of “noema” (Ashworth and Greasley 561-562). Like Husserl, Ashworth and Greasley believe there should be balance, giving equal weight to each aspect of learning, even though it can be difficult to get to the core of meaning (noema); it is an important part of the learning process. In stating “no noesis without a noema,” they suggest that paying attention to meaning for students as they interact and absorb the thing to be learned (noema) necessarily brings with it an awareness of their orientation (noesis) the students have with the thing to be learned (565).

Marton and Pong categorize phenomenography as investigatory in that it examines “the qualitatively different ways in which people understand a particular phenomenon or an aspect of the world around them” (335) while also looking at “different ways of understanding’, or conceptions...typically represented in the form of categories of description” (335). Other metaphors, such as “conception,” also hold

importance in understanding “ways of conceptualizing, ‘ways of experiencing’, ‘ways of seeing’, ‘ways of apprehending’, and ‘ways of understanding’” (Marton & Pong, 336), all of which possess unique relevance in establishing the field of vision for perspective as an element of individual learning style, which cannot be accommodated in a system structured toward the usefulness of one specific purpose.

In reviewing the work of Marton and Pong, several findings emerge. First, their research recognizes the criticisms among theorists, that meaning is a critical aspect of learning that has been historically ignored not just among phenomenographers but the associated fields of research into learning. They also establish the association between meaning and the ability to discern as dependent upon variations in perception and highlight the individual experience and learning style of the student, which they also find to be inadequately documented. Finally, Marton and Pong provide a view of experience that recognizes the subjective nature of discernment in the perception of an object.

Students cannot be forced into molds shaped according to one best method approaches that ignore the individual capacity for learning, as well as the orientation from which each learner enters the learning experience. The strength of phenomenography lies in recognizing the importance of broadening educational programming beyond a process driven, practical skills approach toward deeper, more meaningful communicative experiences, but there remain fragments of empiricism in their definition of phenomenography:

The empirical study of the limited number of qualitatively different ways in which various phenomena in, and aspects of, the world around us are experienced, conceptualized, understood, perceived, and apprehended.



These differing experiences, understandings, and so forth are characterized in terms of ‘categories of description’, logically related to each other, and forming hierarchies in relation to given criteria. Such an ordered set of categories of description is called the ‘outcome space’ of the phenomenon of concept in question (Greasley and Ashworth 821).

### **Variation -Phenomenography’s Counterpart**

Variation theory evolved in answer to the limitations phenomenography places on the cognitive relationship between the student and the learning material. Dahlin considers variation theory to be a counterpart to phenomenography, explaining that they both move from two basic assumptions: first, that humans do not conceive of things as taking place only in a cognitive sense or in the mind, and in the relationship between a subject and object. Next, what is conceived of is not necessarily the same thing as reality or even explanatory as to the basis for the conception. Variation theory becomes critical in constructing a learning theory that considers differences in the way students learn and in accordance with the situation in which the learning encounter occurs. Runesson argues that variation theory approaches each learning situation as having a certain potential for learning to happen and therefore is more of a “space of learning” (406) rather than a specific condition or event or something that can be shaped and controlled by science.

Finally, Runesson applies variation theory specifically to pedagogy. Essentially, she finds that differences in learning can be accounted for based upon the treatment of learning as an object to be learned rather than a result of what is learned, arguing that meaning is derived from awareness. Variation theory’s contribution is the recognition that learning emanates from the individual’s perspective where he or she has to possess

the ability to discern and differentiate between phenomena as a condition for understanding that is related to the situation and the ability to anticipate within the situation. She indicates all of these factors to be influenced by life experience, which can and does change as an evolutionary developmental process (Runesson 401).

### **Summary**

Throughout this research there will be a concern for meaning from the perspective of understanding the place it serves in the distinction between learning and knowledge and in view of learning as a lifelong pursuit. This research argues that meaning is a necessary element that must arise out of the learning process as the ground for developing lifelong knowledge. Therefore, the following chapter will seek to construct how a rhetorical view of learning arrives at lifelong knowledge in arguing that each phase, primary, secondary and post-secondary, if viewed as evolutionary, must originate from the same intention and be aligned along the same continuum toward lifelong learning from the perspective of a lifetime that takes place predominantly during the adult years.

## Chapter 3

### Ancient Rhetorical Theories of Learning

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*...it does make a difference to our lives what, in the end, we want to have succeeded in; it makes a difference what we think it takes on our part to succeed, what abilities and kinds of competence we think we need in order to be...competent human beings; we want to know what it would take to be the kind of person one would, on reflection, like to be, if that were possible; whether and how one could acquire this ability and competence. . It makes a difference what extent we think a society requires and is entitled to insist on...a certain level of competence...and whether we think that in order to succeed we need some critical knowledge to rectify the systematically distorted beliefs that life in a society tends to induce and which, if we lacked this knowledge, would guide us in our preferences...  
(Plato, Protagoras, vii-viii)*

#### Communication in the Crisis of Education Conversation

##### The “Class” of Paradigm Pedagogy

Throughout this research, a communicative pattern has emerged in examining the struggle to determine what education ought to do. It is a story of competing forces vying for recognition and control in order to achieve individual and group objectives.

Particularly during the industrial age of prosperity, the persuasive power business leaders and some educators demonstrated in achieving rhetorical consensus from the public that their plan for a new paradigm geared toward vocational education would be for the good of the country is an example of this phenomenon.

But what remains are questions about the lifelong experience of the student as research points to increasing deficiencies that prevent those who make it to college from launching their academic careers without remedial interventions. Those who decide to press on and continue amidst immense hardship may never achieve the goals they had in mind or fully realize their potential simply because they began their adult education already at a deficit. Discourse about these ongoing problems remains captive to a

continuous cycle of reform which hails from a past era, but it does so because the system adopted according to the aims for education at that time has created a deeper, more fundamental set of problems. There are reasons for this unfortunate situation.

First, the adoption of an untried new educational paradigm by a body of individuals with limited expertise called for the abandonment of tradition in which the language and identity of all discipline structures is contained. Second, the incorporation of a pragmatic-scientific methodology constructed upon principles of systemization and usefulness has had long-range implications as education has continued to define its goals according to that narrow scope. The third problem encompasses two related issues: the problem of paradigm pedagogy in general and mechanistic pedagogy, specifically, as an implementation tool for teaching according to the pragmatic-scientific philosophy and methodology of the industrial educational paradigm. While this approach began with production metaphors of efficiency, new metaphors reflective of the agenda of respective social, political, and economic forces continue to reorient the social mindset of educators and the public toward new metaphors, derivative of the efficiency movement.

Mechanistic pedagogy falls into a class of teaching approaches this research identifies as paradigm pedagogy, classified as such because research and instructional metaphors guiding inquiry remain bound within the conceptual framework of one paradigm to the exclusion of other modes of thinking. Later research assumes the rhetoric of that paradigm to be an acceptable foundation upon which to build new theories based upon three primary assumptions: that its adoption is proof that the theory of paradigm formation has been applied in carrying out pre-paradigm research, that the paradigm has been adopted by rhetorical consensus among disciplinary experts, and that

these individuals have engaged in the questioning of many theories and methodologies prior to the adoption of one. This is not a phenomenon exclusive to the industrial educational paradigm, but it has been the most formative influence on contemporary pedagogy and research since its inception.

Characteristic of mechanistic pedagogy is the abandonment of tradition and knowledge and the devaluation of theory. Legislative policy, research, and teaching have all remained locked in a concentration on production that limited interventions that will move learning beyond school-based, achievement oriented, end game strategies at the secondary level, which moves students further away from the higher order thinking needed to begin adult studies in college. They are certainly ill-equipped to meet the changing educational demands they will face across a lifetime (Houser 78).

This chapter will respond by examining an ancient rhetorical ideal for a theoretical structure to undergird the lifelong learning continuum that is founded upon tradition, theory and praxis with an aim toward knowledge. The Trivium and Quadrivium, the foundation for all liberal arts education, will also be compared to contemporary pedagogical approaches to demonstrate how far removed from those models educational practice has traveled in its practical skills orientation. Finally, this chapter will suggest how primary and secondary education may redirect learning toward the many transitions students will face, from the movement to adult learning at the university level to the shifting educational needs that will present in the course of a lifetime.

## **Clarifying Elements of Postmodern Criticism**

An important clarification this research must make is that the issues and questions discussed here have origins in a postmodernism criticism of modernistic principles, but this research is not grounded in that philosophical orientation. Postmodernism does challenge the principles of modernism that appear here, particularly where metaphors of the industrialist paradigm are compared and contrasted with those of the science and technology paradigm of today's culture. Postmodernism's influence does have significance in that it provides an account of vast movements in society, reflecting upon cultures and the manner in which cultures interact, particularly where the economic and political structure has shifted from a production to a consumption-oriented, globalized model that influences all aspects of life and culture (Bloland 521). Blake argues that it is the particular ground of postmodernism to raise questions and examine problems within these relationships and structures, particularly as they pertain to education (Blake 43); this research is no exception.

Further, scholars working within a postmodernist perspective also attack the assumptions upon which modernism was founded, challenging the validity and legitimacy of all institutions of modern construction. Scholarship written through this voice sometimes argues for a complete divergence away from predominant discourses guiding educational theory in favor of a "radically new theoretical source" or, at the least, "major revisions in the established theoretical tradition" (Blake 43). As such, based upon Blake's definition, postmodernism as a theme is an "intellectual formation which offers the most radical challenge to a wide variety of settled assumptions concerning society, culture, the nature of the individual and questions concerning knowledge and truth" (43).

In that sense, as this research takes place within the postmodern moment and seeks to evaluate the rhetoric of crisis and reform narrative in education that arises out of a postmodernist anxiety, it does have elements of a postmodernism critique, but departs from its core philosophy in a fundamental manner.

The intent behind examining education's history is to construct a transcript, of sorts, tracing the discourse and actions responsible for the construction of the American school system while paying particular attention to the metaphors that have informed educational decision-making from social, political and economic perspectives that define a postmodern culture (Blake 42). There are elements of postmodern criticism that can be found here, but this research also departs from that philosophy, particularly in its commitment to tradition, where postmodern criticism often seeks an abandonment of all traditions rooted in modernism (Blake 42).

This research seeks a return to the timelessness of the discursive tradition through a classical, whole rhetorical education built upon a foundation of theory, experience, interpretation, and knowledge. However, where this research and a postmodern critique are aligned is the recognition of fragmentation as a real and present aspect of society's influence where education today focuses only those parts or skills most necessary or useful for performance and production standards that define its contemporary practice. Fragmentation is not uniquely a manifestation of the industrial educational paradigm, but it is particularly felt in mechanistic pedagogical practices and the experience of alienation John Dewey predicted for the life of the modern culture.

## **What is the True Aim of Education?**

Theorists Secor and Charney argue that the rhetorical ground from which education as an institution should be founded, in the construction of its philosophical and methodological goals, should ultimately aim to heighten intellectual development. This goal presents a problem in that communication about knowledge as a concentration appears to be engaged in a competitive struggle against deeply embedded “performative ideologies” (Valimaa and Hoffman 266) at the level of societal consciousness. Valimaa and Hoffman, of the Institute for Educational Research, note that a shift toward knowledge is occurring at the disciplinary level and can be found in metaphors such as “Knowledge Society,” “Information Society,” and “Learning Society” (265). Dialogue of this nature is occurring internally among scholars within higher education but has not widened to include the outside community. Valimaa and Hoffman’s observation is that academia almost appears to be in a waiting mode, hoping that public policy will redirect education back to knowledge, but such a redirection is not likely to happen.

The two worlds of policy and the good in education, if they engage in a “rhetoric of reason” (Secor and Charney 17), can bring reconciliation among the problems of the human condition, which this research has identified as residing in the promises of modernity, the demands of an evolving society, and the need to move toward meaningfulness in the learning experience. The ground for constructing a framework for interpreting multiple discourses about the effects of the past and the present, to analyze how society might evolve from an industrialized model of education for industrialized economy to a science and technology society rooted in metaphors of knowledge, is rooted



in a rhetorical education that engages solutions of long-standing consequence and embodies an ideal of the good through tradition (Mailloux 40).

In reviewing rhetorical scholarship, the predominant metaphors guiding the field reflect an ongoing commitment to tradition, meaning, knowledge, and interpretation from early Greco-Roman to contemporary practice. Pedagogical and to a great extent, andragogical theories reviewed in Chapter 2 continue to be guided by metaphors derivative of an industrialized model of administration, organization, and teaching. These divergent philosophical paths reflect important differences in the educational practices between contemporary and classical models of ancient rhetorical scholarship, which suggests that learning has a theoretical structure and it is defined by the path it follows toward lifetime knowledge, while also balancing the practical need for skills as part of its structure. Of course, such a model can only be constructed according to the philosophies of Plato and Aristotle as the fathers of all education.

### **Ancient Rhetorical Perspectives on Practical Skills versus Knowledge**

Fifth century scholars Plato and Aristotle founded rhetorical education upon ethical ground that preserves tradition, embodies wholeness and views knowledge as an intellectual virtue. Inherent in their writings, is the theoretical structure for a lifelong, philosophical knowledge continuum that does encompass the tools and skills necessary for everyday life, rather than the short-term approach to “school-long” (Helterbran 261) learning definitive of the pragmatic-scientific K-12 track. It is the goal of this chapter to initiate further conversation as to how the K-12 track and the higher learning continuum might engage in conversation toward merging these two separate and distinct paths.

Plato, Aristotle, and Isocrates, all regarded as the ancient Greek authorities of rhetorical education (Benoit 251), were sharply opposed to a practical skills focus, which they believed to be at the core of the problems in Greek education. They were as concerned about what was being taught to the average Athenian as by whom, a dispute with origins dating back to the earliest sophists, including Protagoras (481-411 B. C) of Abdera, credited with developing grammar (Brubacher *History* 243), Gorgias of Leontini (Jarratt 67), and Corax of Syracuse, whom many believe to be the “inventor” of “the art of rhetoric” (Murphy 3).

Wilcox asserts that some of the earliest handbooks of rhetoric, believed to have been compiled by Tiisias, Corax and later sophists, support the notion that rhetoric served a function almost exclusively directed at developing practical public speaking skills necessary for legal proceedings (Wilcox 121) in which the average Athenian would be expected to participate in representing his own interests. The dissatisfaction Plato, Aristotle, and Isocrates felt with this approach is well documented throughout their scholarship, but Schiappa believes the relationship dynamics that occurred between some of the most prominent sophists, such as Protagoras and Gorgias (Schiappa 6) and the ancient masters, obscures the fact that sophists, too, were concerned with knowledge even in their aim to make education practical. In fact, the root word of sophists, “*Sophia*” (Johnson 202), implies wisdom, which is supported by fact that the first sophists as traveling teachers and diplomats played a “significant role in the intellectual revolution that took place within fifth-century B. C. Greece” (Jarratt 67).

Plato was dissatisfied with the sophistic focus on vocational skills despite their aim to enable citizens to conduct matters of the polis (Raubitschek 195). He differed from

the sophists in key areas, beginning with his view of the nature of knowledge, which he believed to be of the divine and for the good of the soul. He did not believe sophists were capable of this kind of education. However, even though Plato publicly denounced sophistry, his criticisms did not cause him to reject sophistic education outright. Privately, he acknowledged the art as a valuable precursor to his own philosophies, perhaps for the potential balance he saw between a practical sophistic and rhetorical education, which he would not readily state publicly (Kerferd 84). Plato believed knowledge to be a philosophical pursuit, one that spans a lifetime of learning, but he suggested this journey to be composed of a certain order, a structure that is organic in nature.

### **Ancient Theoretical Structure of the Whole Life-Long Learning Continuum**

#### **Plato and the Idea of the Whole as Organic**

Plato describes learning as having an organic nature, almost a living structure that comes into being within a story. In constructing this story, he asserts that one must begin with truth (*Phaedrus* 63) in order to understand the nature of things, and from there one can distinguish between classes of subjects, engage in comparisons, and establish connections between those definitions. The story itself evolves through the linking of many elements that come together within the story and eventually in connecting that story to others. Within this tale, one begins to understand that things have definitions, and they become known and even eventually can be placed in their proper order. Plato suggests this organic structure is that of subject matter; it begins with language and forms a particular discourse that behaves like a “living creature having a body of its own and a

head and feet; there should be a middle, beginning and end, adapted to one another and to the whole” (*Phaedrus* 68).

Knowing this structure, one should be able to bring ideas into synthesis which is a “comprehension of scattered particulars in one idea” (*Phaedrus* 69) with clarity, consistency and with meaning. Then, the student may bring resolution to stories by first learning the parts of the whole and its divisions. The student has to deconstruct the story and then rejoin the parts back to the whole and into its proper divisions. Plato refers to this is two-pronged process as “division and generalization” (*Phaedrus* 70), which helps one speak and think through the back and forth questioning of the dialectic, the “art of composition and division” (*Phaedrus* 12).

Plato saw the ultimate goal of learning to be the pursuit of knowledge, “the pilot of the soul” (*Phaedrus* 52) or the divine food for the intelligence of the soul. This knowledge is the basis of Plato’s own interpretation of the science of true rhetoric, or rhetorical education. Having spent a great deal of time arguing that a sophistic rhetorical education is too concerned with the art of persuasion, he argues that persuasion’s ethical nature is founded on knowledge - knowledge of the truth and knowledge of character. Not only must education follow the process of classification, division and reunification, but its ultimate aim must be knowledge. He suggests how this process might directly be translated to teaching and learning, asserting that first the truth and nature of a subject must be considered:

Ought we not to consider first whether that which we wish to learn and teach is a simple or multiform thing, and if simple, then to enquire what power it has of acting or being acted upon in relation to things, and if

multiform, then to number the forms; and see first in the case of one of them, and then in the case of all of them, what is that power acting or being acted upon which makes each and all of them to be what they are  
*(Phaedrus 74*

This is the theory and methodology by which subjects are introduced through the detailed study of their nature in every part. Plato's analysis reveals the complex nature of the learning process defined by the science of rhetoric which gives subjects structure and a place in the family of their disciplines. The whole lay in the complete study of subjects to the highest degree of accuracy in order to learn the language and proper discourse arrangement that defines what they are and to what class they belong. Wholeness in this sense is identity. The whole, or its identity, cannot be known, and the story will have no meaning unless one knows the parts and their interrelationship with each other and others, in the context of their story, recognizing the specific place each occupies in the whole structure.

Applying this theory to grammar, it is a fundamental area of English that enables a student to construct sentences and write paragraphs and entire essays. One must understand what a sentence is in its whole state and know what elements are essential for a sentence to be whole. Likewise, one must have the ability to take the sentence apart and identify what each element is and what role it serves in relationship to other words. In putting those parts back into the sentence, one must know the proper arrangement so one may put them back in their proper place to make the sentence whole again. For example, a proper sentence must have a noun and a verb, in its simplest form; there may be other words that support or modify each of those words, including articles, adjectives, and

adverbs. If, outside the context of the whole sentence, a student cannot identify an article, such as ‘an’ or ‘the,’ or a verb and its forms or understand the role each plays in relationship to a noun, he will not be able to construct a proper sentence. The lesson becomes vastly more complicated than this simple example, but generally, sentences are parts of paragraphs in their proper arrangement. Paragraphs compose entire essays, broadly speaking. Each is part of a whole and is an essential component in the story of the discipline of English.

Mailloux argues that the science of rhetoric gives disciplines their identity, from natural sciences to humanities, both in terms of their accounting for and defining what they are and from what grounds they spring. Knowing the identity of a discipline is related to its mode of interpretation. Learning the “rhetoricality” (17) or the rhetoric of a discipline is necessary for both students and academicians who develop the ability to understand, practice, and explain the subject matter and its proper place in the entire discipline’s structure. Following this process teaches the “discursive authorities” (Crosswhite 15) disciplines have that are defined by a unique set of rhetorics, protocols, and preferences that compose their language. A student cannot arrive at a place of knowledge without developing a firm grasp of the way disciplines operate and the manner in which the professions produce knowledge in their unique “intellectual enterprise” (Crosswhite 15).

### **Aristotle and the Whole as the Intellectual Virtue of Practical Wisdom**

Aristotle was also concerned with the whole of knowledge. He implied that the theoretical and experiential manifest in knowledge that comes into being as a practical wisdom that connects the rational and irrational parts of the soul (*Nichomachean Ethics*

1138b18-5). Phronesis unites these two parts of the soul in the pursuit of truth and in distinguishing what is good from that which would not be a good choice. In this sense, practical wisdom is an intellectual virtue that enables one to develop the ability to deliberate upon matters, to engage in inquiry, linking together complex matters in a weighing and balancing of theory and experience that culminates in an insight; a wisdom that develops over time (*Nic. Ethics* 1112b16-17-1113a6-18), or a lifetime of learning.

MacIntyre explains his interpretation of Aristotle's theory of phronesis as a practical rationality through which the "educated agent" develops the ability to reason along a series of interdependent phases (124). Again, the ethical aspect of knowledge generation arises here as the first through third steps of what can be likened to a structure of practical rationality. The student must have the presence of a particular kind of capability, a process of reasoning that is dialogic in that the student must engage in a back and forth internal questioning before he is able to arrive at the right action according to what he reasons he ought to do to achieve the good. There is within this process an assumption that the many components and nuances that are found within knowledge construction are in place, which allows for independent, critical, and creative thought. The individual who has this kind of knowledge possesses the reasoning structure that enables him to evaluate and characterize each situation independently and understand what possible actions may be applied to address the specific features within each learning situation (125).

Understanding is a natural aspect of this reasoning process, according to MacIntyre, who describes reasoning and understanding in what could be viewed as a two-pronged event in which the individual reasons according to his understanding and then

determines what is “immediately possible for him to achieve” (126). During this reasoning, the student must have a teleological view as the mind must engage both the practical and theoretical knowledge, examining those things he knows to be true, what actions are possible, and what means are appropriate to achieve according to the ends ultimately sought. This process of deliberation is, in part, knowing the rules that generally hold, which gives a security to intuit when they don’t and to find an alternate route toward the good, the outcome or a solution, particularly where the situation is fraught with uncertainty or indeterminate. Deliberation may be understood to be the observation component in the “faculty of observing in any given case the available means of persuasion” (Aristotle, *Rhetoric* 1355b26-27), which enables a student to understand, interpret and intuit right action.

Finally, MacIntyre argues that there are steps that compose the comprehensive structure of the “virtue of phronesis,” (MacIntyre, 126) which assumes that the individual who embodies this character has been well trained in “highly specific contexts” (126) performed “systematically” (126) so that he may develop the experience necessary to unify this breadth of knowledge in a single act. Aristotle believed a virtue of faculty is wisdom, which “must be the most perfect of the modes of knowledge. The wise man therefore must not only know the conclusions that follow from his first principles, but also have a combination of intelligence and scientific knowledge” (*Nic. Ethics*, 1141a3).

Plato and Aristotle both suggest that there is a natural order to thinking (Powers 158) that embodies process in that it leads to knowledge. Process embodies a unity and represents a flow to learning that follows along a continuum imitative of nature. Aristotle makes numerous references to the whole in examining the cohesive



nature of stories, which are parts of a “whole” but lack meaning until those parts are brought together, stating: “A whole is that which has a beginning, middle, and end” (Poesis 1450-26-27). Without these elements coming together the story makes no sense:

A beginning is that which is not itself necessarily after anything else, and which has naturally something else after it; an end is that which is naturally after something itself, either as its necessary or usual consequent, and with nothing else after it; and a middle, that which is by nature after one thing and has also another after it (Poesis 1450-27-30).

Aristotle further stresses that a “well-constructed Plot” (Poesis1450-32-33) cannot begin at any part one chooses; it must start at the beginning and flow meaningfully to an end. He, like Plato, also likens the knowledge story unto a “living creature” or anything at all that is a whole, which achieves beauty only when there is “present, a certain order in its arrangement of parts” (Poesis1450-34-37). In other words, creatures and things are whole, with a unity of being that does not lie only within their tangible physical state. Even the abstract nature of knowledge appears to come into being only through wholeness.

### **The Whole as Foundation for all Knowledge Endeavors**

John Henry Newman, the mastermind of the Western “conceptualization of higher education” (ix), embraced the notion of wholeness in education and the idea that learning should invigorate the mind, body, and spirit of the student. He implied that in order for a student to develop the ability to deliberate upon difficult matters, there must be

wholeness in the pursuit of knowledge. Students must develop analytical and reasoning skills in order to reach reasoned, sound conclusions that are well-informed and relevant within any given time and situation. Newman suggests that there is a union between the development and enlargement of mental powers that can only evolve through a deeply intensive and rounded course of training he viewed as “a scientific formation of mind” (109).

A wide breadth of knowledge and inquiry of this sort becomes an “acquired faculty” comprising of a number of elements that have been gathered through a vast effort to unite theories, exercises, experiments, teaching and many other pieces of the learning endeavors, which in and of themselves are not enough. It is the integration of the many parts that leads one to judgment, wisdom, and the ability to attain philosophical reach and “intellectual self-possession and repose” that leads to the formation of knowledge. Only through a “Liberal Education” (109), designed with purpose and instilled with discipline, can true knowledge be achieved.

Wholeness also refers to experiences that are not limited to the mind; it also evolves through a complete study that invigorates the body and spirit as outlined in the Trivium and Quadrivium. As the ancient classical basis for contemporary Liberal Arts education, the Trivium and Quadrivium incorporated the practical with knowledge through a recognition disciplinary identities, ordering each constituent subject matter in its proper family and incorporating the aesthetic through arts and gymnastics while providing lessons necessary for the performance of daily civic duties of Greek life (Brubacher *A History* 243).

## **From Classical Education to Integration and Fragmentation**

### **Trivium, Quadrivium, and the New Integrated Curriculum**

The Trivium and Quadrivium, what would become the intellectual, physical, moral and aesthetic core of ancient Greco-Roman educational studies, are argued to have been designed to achieve harmony in their balancing of education and life studies. Learning did include the development of practical skills necessary for household management, civic affairs, and public speaking, but studies were ordered and presented from a foundational approach to advanced instruction. For example, the Trivium was comprised of grammar, rhetoric, and logic, or dialectic, which involved both literary practice and effective speaking abilities (Brubacher *A History* 244). In the contemporary classroom, subjects traditionally defined according to the distinctions of the Trivium have been fragmented from their disciplinary identities and classified under an overarching, general category of Language Arts. Discipline stories are no longer told; they have become fragmented by a unification of unrelated parts.

An example is found in Integration of Language Arts programs that came about as a result of a philosophy, that Robert Stevens of The Pennsylvania State University describes as a forty-year goal designed to move middle schools toward greater “responsiveness to the unique abilities of young adolescents” (1), in speaking of creating a learning environment that matches the developmental abilities of students (1). Developmental abilities are defined according to assessment and achievement guidelines used to evaluate reading, and writing skills based upon student performance on standardized reading and writing tests.

The structure of these programs concentrates several different functions into one course under categories, such as instructional procedures, “literature as the basis for instruction,” (Stevens 7) peer-learning, and the integration of reading and writing instruction. Instruction in grammar has all but disappeared along with other subject matter outline in the Trivium. Stevens cites success in improved achievement scores and writing “expression” (8) as a result of the integration movement, which has spread across all grade levels in K-12 programs in the United States. Similar measures have taken place with the classical model of the Quadrivium.

The Quadrivium included the study of arithmetic, geometry, astronomy, and music, with mathematics regarded most highly by Plato, for his belief that it “sharpened the mind” (Brubacher *A History* 244). Mathematics was recognized in a limited capacity. Although it was not a fully developed discipline at that time, it was coming into recognition for the practical significance it held in the crafts and the domestic economy even of that time. As implied in the previous example, Plato recognized a deeper connection between higher thinking and the study of math, noting a marked increase in intelligence even among students lacking in a propensity toward the subject due to its quality that enables one to “reason in the abstract without reference to concrete reality” (Brubacher *A History*, 244). In other words, learning from a theoretical foundation enables later advanced comprehension of abstract concepts.

While science, too, was a part of the early Quadrivium design, Astronomy held the highest regard for its “functional value” in keeping track of time. Pythagoras (580-500 B. C. ), formulator of the Pythagorean Theorem in geometry, had an early and unique insight into the place other sciences would hold in the evolution of society, and he sought

to include geography, physics, and the study of medicine in the curriculum. Science would become an important aspect of curriculum, but remained a secondary concern until the rise of modern science in the sixteenth and seventeenth centuries (Brubacher *A History* 244). Even science and mathematics programs have become fragmented from the identities outlined here.

Drury University (Springfield Missouri) spearheaded a program designed to integrate mathematics and science curriculum, a “new paradigm” (Deeds, et al. 178) designed to identify non-science majors and more efficiently and effectively condense math and science requirements into one course under two categories of math and science respectively. As part of the new curriculum design, Algebra, Trigonometry, Statistics and Calculus no longer retained those distinctions but would be unified into a general Mathematics and Inquiry course. Rather than learning facts, theories, and concepts in an interactive learning exchange, the instruction would move to small group study on word problems, exams, and written essays on the “nature and relevance of mathematics” (Deeds, et al. 181), an orientation that would support later mathematics and language arts integration programs. Science disciplines would undergo the same treatment. Programs such as this have eliminated the study of foundational instruction in basic algorithms beginning in primary grade levels. As such, integrated programs exhibit two primary problems: a mechanistic process orientation, or the teaching of skills isolated from their family of subject matter and disciplinary identity and in so doing, embody fragmentation, which is symptomatic of a deeper postmodern orientation away from tradition (Blake 42).

## **Industrial Roots of Integration as Fragmentation**

Integrated curriculum seeks to “integrate higher level processes and specific conceptual thinking activities with strong content” (Little, et al. 272). Under the language-arts, math, and science programs briefly described here, subject matter is divided; this is a process of extracting concepts and processes from subjects traditionally taught according to a “separate subject curriculum” (DeHart and Cook 3). Under integrated curriculum, subjects are taught according to a “multidisciplinary approach” (DeHart and Cook 4) that links separate subject areas under common “themes” (DeHart and Cook 4) and an “interdisciplinary approach” where shared content, skills, and “attitudes of discipline areas” (DeHart and Cook 4) are taught within a given theme.

Integration and the programs that fall under this instructional methodology are referred to as “new paradigm(s)” (Deeds et al. 178). However, this research places them under the class of paradigm pedagogy constructed out of the industrial educational paradigm. Fragmentation is the key metaphor that describes the characteristic separation of subject matter: separation of concepts from the subject and subjects from the larger discipline family. Plato and Aristotle recognized the critical need to learn the parts of the whole subject and its divisions first of all. From that point, the parts of the respective subject are rejoined back to the whole, and its divisions under the “division and generalization” (Plato *Phaedrus* 70) theory. Integrated subjects, once separated, are not rejoined to their stories in the proper arrangement, concepts or parts; they are put together according to themes that limit students to a concentration on specific processes.

In their contemporary application, production metaphors originating from the industrial educational focus on efficiency are designed to enable student effectively to

learn concepts and reproduce processes for performance on exams designed according to assessment and achievement standards. Scholars acknowledge goals of “higher achievement” (Steven and Slavin 321), “student performance” (Little, et al. 272), and “school effectiveness” ( Feng, et al. 78). In fact, one of the greatest challenges for educators is providing evidence in the form of achievement gains, and of course, such gains are associated with competition for “limited dollars” ( Feng, et al.. 78).

Similar patterns of division are found in the political science and social science disciplines across methodological and epistemological lines that demonstrate a deep fragmentation at the level of research. Fragmentation is the overarching metaphor that describes the postmodern state of intellectual enterprise, or what Lasswell described as “the fragmentation of intellectual life,” which has reduced the number of intelligent persons who understood and gave attention to knowledge as a map or as a whole (439). John Field, of the University of Stirling, UK, looking specifically to undergraduate and postgraduate education programs, also registers concern that in Britain, fragmentation is a metaphor describing the field of adult education as well, asserting that curriculum has become “very disparate and fragmented” (121).

The stories of many disciplines, such as the social and political sciences, have become mere abstractions of their original forms, as in the case of physical sciences and medicine that no longer hold many shared paradigms (Zald 251). Integration and fragmentation both tell a general story of paradigmatic differences that can serve as barriers to the development of shared inquiry into old questions and the generation of new ones (Garand 981), a concern Dewey expressed, as mentioned in Chapter 2. These metaphors are also indicative of assumptions within research and pedagogical design that

the focus on metaphors of production should resolve education's problems, but there is no recognition that the structure of the school system in its very design is problematic.

Further programs that follow the philosophy of integration are missing the theoretical structure by which learning occurs. They fail to recognize the organic nature of the process, which is whole even in the abstract nature of human thought. At the micro level of subject matter, wholeness as a metaphor assumes that a thorough study enables the student to learn the rhetoricality of subject, to understand where each parts fits in the story and in the context of the larger identity of the discipline. Whole learning encompasses both mechanistic and organic elements that balance the study of skills, theory, and experience.

The concept of whole learning can be translated to schools. Schools are theoretically situated within the story of the learning process at the macro level of primary and secondary and post-secondary institutions as units. Each is situated along the continuum; each has a part, and a proper arrangement that must be followed for the story to make sense. There is, according to this theory, an assumption that each grade, with the exception of the very first level of primary school, requires a prerequisite body of knowledge and skills in order that the next phase might continue the process. This assumption of an ordered relationship might also extend to the notion that primary and secondary levels of education are theoretically designed for the teaching of children who, at the level of a post-secondary education, are prepared to begin the adult learning phase.

Process has been referred to in two ways throughout this section, which requires clarification. In its simplest terms, process is merely a recognition that learning must be holistic in its endeavor to provide for a comprehensive experience in terms of teaching



and learning. Another understanding rests on the embodiment of fragmentation for its characteristic separation of concepts from the context of their whole stories. In the following section, these two forms of process are defined.

### **Mechanistic Process vs. Organic Process in Learning**

Process can be understood in terms of a rhetorical approach to the learning continuum in two ways, as a mechanistic process, or the teaching of those skills and processes necessary for performance and production, and as an organic process, which is dynamic, dialectic, and whole in the context of learning the rhetoricality of a disciplinary language. Mechanistic process teaching encompasses the metaphor of fragmentation in its method of extracting subject matter from the larger discipline stories through the act of integrating a number subjects into one course. This type of process generates “surface” learning or “noesis,” (Ashworth and Greasley 561-562) in Husserl’s terms. Characteristic of this method is teaching to the test (Madaus 606), a practice designed to “jettison” students quickly into the reproducing or “spitting out” of what they have memorized from prefabricated, packaged assignments that are isolated from any meaning (Helterbran 262). Reproduction refers to performance for measures such as testing and benchmarking according to standards of efficiency, effectiveness (Callahan 81) and achievement (Graham 109), or the “the Three A’s” of achievement, accountability, and assessments (Helterbran 261).

The result of methods that follow this orientation is an imbalance in the learning experience where higher order thinking required for knowledge is never developed. Foundational level competence and skills (Istance 85), or “essential lower order skills,” (Helterbran 262) or foundational skills, which can be viewed as building blocks critical to

the learning process as a structure and necessary for the development of active, independent lifelong learning (Istance 85) abilities, are simply not taught.

Organic process learning is one aspect of the larger learning continuum and embodies mechanistic processes, or skills learning, as appropriate to their discursive arrangement in balance or by “structured distribution” (Istance 85) of the practical and knowledge. This type of learning opens the student to discovery that is generative in terms of the human agent coming into self-understanding of experiences that unfold within events or processes (Ranson, et al. 12). Discovery becomes a learning “sense” (Ranson, et al. 12) that develops as the learner encounters variables, such as concepts, skills or other elements, that reveal themselves as layers within the learning process. This approach is characteristic of “deep” or “noema” (Ashworth and Greasley 561) learning, which is concerned with whether students gain meaning from what they study.

### **Berlo on Process in the Construction of Meaning**

Both mechanistic and organic elements are found the communicative structure of language, particularly the language of disciplines, which have meaning structures and specific ingredients that evolve within dynamic interrelationships with each other. These relationships are “on-going, ever-changing, (and) continuous.” A student who does not have all of the “ingredients within a process” (Berlo 24) will have no understanding as to how each interacts and affects all of the others. All phenomena behave according to this nature, but mechanistic process teaching approaches learning, as in integrated curriculum, in terms Berlo describes as merely a random compilation of events or ingredients that take place exclusive of each other as though communication within a disciplinary language is one-directional. Communication at all levels, from subject matter to the

discursive language of a discipline, is multi-dimensional and can be viewed as a set of tools through which one analyzes and describes the world around one (25).

Berlo states that education is a type of process; it has ingredients, including students and teachers, the materials they use, and the building in which they learn, teach and study, that can be ordered by time or any other of the ingredients. By putting all of these ingredients together in some particular way, we can say that the student has “received ‘an education,’” but this “education” lacks the recognition that communication is a process and that education is dynamic. By simply combining those ingredients, we have not achieved learning or meaning, necessarily, but we have certainly laid a critical foundation for learning to occur.

Where process is necessary in learning a particular skill or in performing a task, a student comes to understand that thing only if it has meaning. Understanding is connected to the meaning of things, why things behave in the way they do. If the why is understood, the context becomes nearly irrelevant. As the various pieces of information, theories, and experiences arise in later contexts, they come together like the building of a puzzle because there is at hand an understanding as to the relationships and meanings of each piece in relation to the whole discipline story. Active learning of this nature becomes a source of power within the student who comes to identify himself as capable of thinking through complex information, applying it to situations that results from a knowing of all that is there within the horizon of experience (Ranson et al. 13).

What could be the aim of the mechanistic pedagogical commitment to the teaching of “useful” (Bagley *Craftsmanship* 98), practical skills in a knowledge oriented society? And, where does a student arrive, even if a formal education is to have the

ethical end, as William Bagley describes, if the goal for the system falls outside the context in which it was originally constructed? The industrial model of education has no philosophical or practical home. As time has evolved since the adoption of the industrial educational paradigm, more metaphors of production have been added that are even further removed from meaning because the goals for these measures cannot be associated with a larger body of goals relevant to today's circumstances and demands.

What do the metaphors, "achievement," or "effectiveness" mean and to what aim does each of these measures aspire in terms of the ideal to which these standards are being held? Is there any relationship between the standards and measures being applied and what is expected at the college level? What is the purpose of these measures in the context of the purpose education serves in one's lifetime? What effect have measures designed to meet these impossible objectives, such as integrated curriculum, had on the academic life of the student in light of the fact that remedial programs are expanding at the college level? Learning designed to achieve short term objectives relevant to the world of school life does not anticipate the changes, demands, or opportunities that will emerge over the course of one's lifetime. There are sound reasons for a lifelong knowledge pursuit as the aim of education.

### **Learning, Knowledge and the Significance of Lifelong Education**

#### **Lifelong Learning as the Basis for an Adult Lifetime of Education**

The purpose of unifying lifelong learning scholarship with pedagogy and andragogy is to situate the conversation about education within a story that has a beginning, a middle, and much later in life, an end. Lifelong learning scholarship defines the purpose of education and creates a point of relevance by which each learning phase,

including primary, secondary, and post-secondary learning, may be conceptualized in terms of where they sit along the continuum of learning. Lifelong learning (LL) as a concept first gained attention during the 1960s as a result of research supported and disseminated by the UNESCO Institute for Education (UIE) and articles that began to appear in the *International Review of Education*. Over the course of the next three decades, the philosophical concepts and principles guiding research would evolve from historical and statistical evidence that would provide a rationale in support of “lifelong learning” and “lifelong education” (Tuijnman and Bostrom 94).

What findings from international studies would reveal is that the heritage of culture and knowledge is directly impacted by social and cultural changes over the lifetime of a human being who must develop the ability to master the practical and “immediate life task(s)” (Tuijnman and Bostrom 95) while also becoming empowered, in both mind and soul, toward continuous learning. Best explained by the definition constructed by R. H. Dave in 1976, this lifelong approach to education does not “terminate” (Tuijnman and Bostrom 96) at the end of formal schooling, encompasses all stages of education from pre-primary, primary, secondary as well as later life experiences, and is multi-dimensional across every stage of life. Tuijnman and Bostram refer to a definition Dave provides that describes what lifelong learning involves:

A process of accomplishing personal, social and professional development throughout the life-span of individuals in order to enhance the quality of life of both individuals and their collectives. It is a comprehensive and unifying idea which includes both formal, non-formal and informal learning for acquiring and enhancing enlightenment so as to attain the

fullest possible development in different stages and domains of life  
(Tuijnman and Bostrom 95).

Strain, British scholar at the University of Ulster, stresses the implications of the “formative reflexive relationship that exists between learning and the individual’s conduct and experience of life” (264) in its practical applications to the economic and social stability of societies. He argues that achieving equity, as Plato argued to be a human condition of life, between what is desired in terms of economic growth and “human well-being” actually is an interdependent relationship that must begin to recognize how the focus on manufacturing and production has abstracted men from their “traditional sites” (264) in family and community. There is a naturally occurring shift that is moving away from “rational interests” (265), i.e., profit and efficiency, interests driven by a “labour society,” toward a “learning society” (265) that is becoming more directed toward what is best suited for a lifetime of social and economic growth: knowledge. Post-industrial culture is moving the requirements of human engagement beyond those defined by the manufacturing and production paradigm, making the point that there must also be a shift in educational directives away from the demands of a “labor society” to a “learning” orientation (265). These movements are important in redefining the purpose and function of education and the means by which learning happens and is evaluated. Based upon these findings, the demand is moving further toward a concentration on lifelong learning.

David Istance, with the Organization for Economic Co-operation and Development (OECD), a researcher in lifelong learning scholarship, examines the relationship between lifelong learning (LL) and schooling to evaluate the role schools

have historically played in the lifelong learning continuum and to examine how effective schools are in fostering long-term competence and the skills necessary for the advancement of the active, progressive lifelong learning process (86-87). On an interdisciplinary level, scholars are beginning to recognize the value of an adult focus in education based upon the notion that learning does span across an entire life, with the majority of educational requirements falling into the adult years. Richard Zinser, Associate Professor at the Career and Technical Education Department, Western Michigan University, believes the goal of education is to “prepare young people for the adult working world” (64), while recognizing that shifting paradigms in an atmosphere of global change brings to light the need to take seriously future education needs. Zinser says: “The education of future citizens is of critical importance and will certainly be a significant part of the imminent world society” (64).

Houser cites statistics from the US Department of Education, National Center for Education Statistics, gathered in 2002, that show 43% of undergraduates to be above the age of 24 (78) with 12%, over 40 years of age. With this population continuing to grow, she asserts there is a need to further understand the instructional communication needs of nontraditional students, but this research also may provide further insight into one aspect of the education problem where methodologies and practices only prepare a student for “School-Long Learning” (Helterbran 261). Houser’s statistics also suggest that the role institutions of higher learning play in the rhetoric of crisis criticisms should be examined where colleges and universities are assumed to hold some accountability in the failures among college students transitioning from high school. In the lifetime learning

continuum, primary and secondary schooling is designed to prepare the child for advancement to adult studies at the university level. Each phase of learning falls into a proper arrangement within the story of formal education.

Further, Arnett stresses that “Lifelong learning is essential if we believe that ‘new’ information, insight, and interpretations will make some basic information, now considered contemporary, obsolete and limited” (64-65). He suggests that the key to this approach lay in an “education of breadth that embraces basic information acquisition and creative application” (68), or a commitment to “both specialization and breadth” as the foundation for creativity and a development of the ability to examine a multitude of issues from varied orientations. This understanding defines his dialogic education theory.

### **The Temporal Nature of Learning**

Learning that is geared toward lifelong knowledge is comprehensive in its investigation and application, is mindful of the natural order of the human thinking process, and serves as a foundation from which knowledge may be constructed as the basis for a lifelong education. From this perspective, learning may be understood as an unfolding of events that occur as a series of “now moments” (Steeves 2), each having boundaries and limits within the original and subsequent experiences. Later, in future encounters, the student who has engaged in this holistic approach is challenged each time he is presented with variables that do not exactly replicate previous learning events but is secure in a complete foundation of skills and knowledge. A student armed with this potential can move quickly beyond the anxiety of uncertainty to interpretive action. He will begin to recall a collection of variables, skills, theories, and experiences that reside within his “horizon of understanding” (Steeves 2) and bring that information back to life



as it becomes present and relevant in a new context. A student versed in the variables and particulars of multiple learning moments will also have the ability to envision possibilities within each new event where he can journey into a different, unique “narrative horizon” (3). The significance of this kind of learning is that we develop a certain power and capability that unfolds within our own agency, a distinctive quality of human life (Gollobin 14).

### **Summary**

Throughout previous chapters and the current chapter this research has referred to the industrial education paradigm in terms of what has happened following its adoption and has addressed the circumstances that gave way for public acceptance of this new education. As the previous chapters have stated, the industrial revolutionary educational paradigm moved from a pragmatist philosophy of education and the methodology of scientific management as a means by which education might become more production oriented that is, practical and useful in preparing students for an industrial life. The public school system born of that plan was not designed to prepare students for a college life nor a life beyond industry. Further, the abandonment of theory, tradition, and knowledge as the aim of education limited the K-12 learning continuum to structuring learning according to metaphors of production, such as efficiency, which have evolved to assessments and accountability. Quite simply, the industrial educational paradigm is still quite predominant in directing educational policy, pedagogy and practices.

But fundamentally, there is a larger purpose for examining how this paradigm came to be, on what grounds and by whose participation the industrial pragmatic-scientific model came to be applied on an international, interdisciplinary scale to

education. In order to understand the true significance of this paradigm, it is important to understand how paradigms ideally should form according to Kuhn's theory of paradigm formation. Chapter 4 will examine the theoretical basis for paradigm formation, evaluate the role of tradition in honoring the expertise of disciplinary peers in pre-paradigm research and subsequent implementation, and the likely consequences that result when a paradigm is adopted by rhetorical persuasion of social, political and interest groups rather than through a dialectical exchange that preserves the integrity of disciplinary peer discourse as the center of paradigm change.

## Chapter 4

### Paradigms and Metaphors and the Turn from Knowledge

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#### The Industrial Educational Paradigm

##### The Theory of Paradigm Formation vs. Industrial Education Paradigm

Crisis and reform as a narrative of educational failure in the contemporary American public school system has philosophical and methodological origins in the industrialization of education but how this movement continue to have such a profound influence today? To understand this phenomenon, this chapter will explore the history and function of paradigms and their significance in directing research, teaching and learning by comparing key characteristics and metaphors that suggest why this research argues that the industrial school model should be classified as a paradigm. Following, guidelines for approaching pre-paradigm research, paradigm adoption and subsequent paradigm shifts will be examined according to what Kuhn outlined in his theory of paradigm formation.

Paradigms came to be recognized as an interpretive-and action-based arm in the body of rhetoric as a science, through Gadamer's *Truth and Method*, Kuhn's *The Structure of Scientific Revolutions* and *The New Rhetoric*, written by Perelman and Na Olbrechts-Tyteca, all considered to be the foundation upon which the language and practice of scholarship, scientific discovery, and research has evolved. Their works all approached, from varied perspectives, the idea of what normal science is and how research comes to speak and act through paradigm focused thinking and activities. Kuhn argues that paradigms have a history, in terms of how and why they came into existence, that reveals a strong discursive tradition guiding theoretical assumptions as

to the discourse that takes place prior to the adoption or shift of a paradigm and who, in terms of disciplinary peers, is likely to be a part of that that conversation. As this chapter will reveal, none of these characteristics are found in the industrial educational paradigm.

In the second part of this chapter, the impact and meaning of metaphors will be examined to understand the limitations and that power concepts such as efficiency, effectiveness, usefulness and time hold in framing research, teaching and practice.

### **History of and Scope of Paradigms and Paradigm Formation**

Today, the word “paradigm” is used across the sciences to describe a “constellation of beliefs, values, techniques” (Bryant 354); a “locus” (Kuhn 11) of professional commitment as a sign of maturity in the development of a discipline or field of research, as a “comprehensive structure(s) of thought” that is/are long-lived within a disciplinary body of research (Baigrie and Hattiangadi 435), or in referring to the manner in which scientific achievements come to be recognized universally and inform the development of theories, models, solutions and “shared interpretive strategies” (Mailloux 16). Paradigms are thought to bring coherence to scientific inquiry and enable deliberate approaches in organizing learning models while also providing a structure for developing scientific propositions for further research (Rayner 255).

Generally, paradigms can have profoundly positive aspects and equally limiting characteristics in both “scope and precision” (Kuhn 24), particularly when they are first adopted. This is both an expected vulnerability as part of their design and an opening for future questions to be posed. Some researchers argue that the anticipatory nature of paradigms can be viewed as a force of stability, offering reinforcement within a “larger context of intellectual discord among scientists” (Baigrie and Hattiangadi 435), but not so

helpful when consensus unduly squelches dissent. Therefore, they are most valuable when they follow the principles of “normal science” (Kuhn 10), which assumes that scientific and academic communities move from shared criteria for evaluating problems and selecting research questions, albeit with varied rules, methods and achievements but always with a mind toward the traditions guiding the field.

The evolution of paradigms and their relationship to science and academia is found in looking to historical research, prior to Newton, when it was common for there to be variations in the scientific treatment of any given body of discipline respective knowledge. This era of discovery is typified by shared confusion among scientific peers, all of whom worked from diverse paths. Because scientific processes were prolonged, and researchers rarely documented successes and failures, disciplinary peers also lacked an ability to form a unified, structured body of discourse through which research questions could be engaged (Kuhn 10). As an example, Kuhn argues: “No period between remote antiquity and the end of the seventeenth century exhibited a single generally accepted view about the nature of light” (12). There were a number of schools that approached research into the nature of light from the perspectives of Aristotelian and Platonic theories because each school worked within a particular metaphysic that was conveyed in terms of findings. These “paradigmatic observation(s)” (Kuhn, 12-13) or insights were viewed through the individual perspectives of a particular theoretical lens through which scientist conducted experiments. Those observations were all considered to be building blocks in the ongoing research structure where each body of findings was not treated as a separate paradigm but this was not the best way toward discovery.

Newton was the first to establish a uniformly accepted paradigm from which a body of concepts or metaphors, phenomena and techniques was systematically applied throughout the scientific community. The absence of guiding metaphors prior to his research created the necessity on some level, for every scientists to “build anew from its foundations” (Kuhn, 13), and this approach lacked control or consistency across experimentation and observation, because there was no generally accepted method or phenomena from which to draw. Kuhn did not suggest this to be problematic; rather, this kind of approach is descriptive of the pre-paradigm phase where there is freedom to research new ideas that are introduced outside the structure of a universally recognized paradigm. The background of paradigms suggests that they can bring a necessary structure to scientific and academic thought, language and action, in part because they bring a “rhetoricity” (Mailloux 17) to the conversation that academicians, and students employ in understanding and identifying their discipline.

Several primary characteristics emerge within the analysis of the industrial educational paradigm that are strikingly different from Kuhn’s theory of paradigm formation and as this research asserts; it is these key features that identify the industrial model of education, specifically in the turn away from a tradition of dialectic as the foundation of the discursive tradition of paradigm formation, theory as the basis of research, and teaching and practice and knowledge as a lifelong pursuit and the core concentration of a whole rhetorical education.

Brubacher argued that Plato himself, believed the dialectic to be not only fundamental ,in terms of discursive practices in the construction of pedagogical models but critical in the discovery of truth and basic to the “intellectual comprehension of any

truth whatsoever” (*A History* 243). Further, Aristotle describes theory or “theoresai” (Farrell 324) in the Greek root form, as “seeing,” (Farrell 324) which is an “ocular-centered aesthetic of Greek tradition” that refers to sight or ways of seeing that are shared with others. As this chapter will demonstrate further, these key aspects of research, teaching and learning are not present in the design for an industrialized, mass system of public education.

### **Distinguishing Characteristics in the Theory of Paradigms**

#### **Feature One: Tradition as the Center of Disciplinary Language and Practice**

The first feature that separates the industrial educational paradigm from Kuhn’s theory, tradition, is not a unique characteristic of paradigms; it is what comprises the identity and structure of disciplines and the research that takes place within them, at least prior to the early nineteenth century. Gadamer, who should not be confused as being in favor of paradigmatic thinking, argues tradition to be a critical form of historical consciousness from which the “living unity of world,” the history of a language, of a discipline resides, in his explanation as to the meaning of literature and why reading is more than a reproduction or performance. Knowledge itself evolves from the history of a work, which is more than an effect; it is a “trace a work leaves behind. It is...a consciousness of the work itself” (Gadamer 341).

In the context of the social sciences in particular, Gadamer speaks of a “Geist” (4) or spirit that is within the human sciences in describing what he believes has been lost in the scientific revolutionary movement toward universalizing the language of disciplines. This “science of society” produced in the early nineteenth century seeks a “methodological ideal” that is “neither historically derived nor epistemologically

restricted” (6) as is the logic that guided the human sciences prior to the move toward interdisciplinary standardization. It is through history that the sciences will gain stability and further progress.

What is critical in applying the notion of tradition in understanding paradigms is the recognition that some scholars support them and others do not, but on either side of the argument, tradition is recognized as a valuable aspect of research. Kuhn’s notion of a paradigm suggests tradition itself to be a form of a unified discourse that becomes an important rhetorical forum through which experts within a discipline can communicate about new ideas while also considering the body of knowledge, practices and habits that have given “membership” (Kuhn 11) within a discipline. History prepares all who have come before and likewise gives ground to the student who joins the existing members of that community who then pass along their base of expertise about fundamentals that guide the field. Researchers, academicians, and students learn, perpetuate, and contribute to the evolution of the language that guides the teaching and learning of a discipline and ultimately the shared meanings and interpretive strategies that form within the paradigms they adopt.

Phillips also notes the centrality of language in Kuhn’s notions of science and paradigms in the sense that communication plays a vital role in continuing the traditions upon which research is dependent (Phillips 38). The very models by which scientists practice the profession are given coherence through that language; it is both informed and defined by the traditions of and later practice of scientific research. Contemporary research should theoretically be guided by and build upon historical scientific achievements that have been acknowledged by an academic or scientific community as



the foundation for its further practice (Kuhn 10). Whether researchers embrace the notion of a paradigm or not, tradition is an inherent aspect of the “shared consensus” (Phillips 38) that forms a language and to some degree, standards and rules guiding the practice that becomes the basis of a paradigm. What is the significance of tradition in the structural and communicative formation of the industrial education paradigm?

### **Taylor’s Interpretation of SM’s Scope and the Foundation of Tradition**

The abandonment of tradition was the very goal sought through the rhetoric of “reform” (Callahan 19). A vulnerable American society seeking growth and change to overcome tremendous social and economic hardship embraced the notion of a new system that held international acceptance and approval and fell into the ideal of scientific management as the “great panacea” (Callahan 65) that would bring the success of business to schools. Tradition, traditional curriculum and the language upon which centuries of scientific research and teaching were constructed were all set aside and deemed a “waste (of) energies” (Callahan 9). Employing both emotional and evidence based appeals, statistics in support of reform were published showing that the traditional system routinely “throws” “ninety-three out of every one hundred children into the world of action absolutely unfitted for even the simplest tasks in life” (Callahan 51). In the place of tradition was the mystical promise of the same “miracles” (Callahan 65) for education as had been realized in the business community.

Taylor himself was at odds with the promises made by industrial educational paradigm proponents, not believing SM principles to have the reach at least initially. He recognized limitations within his own system, having stated: “Scientific management fundamentally consists of certain broad general principles, a certain philosophy, which

can be applied in many ways, and a description of what any one man or men may believe to be the best mechanism for applying these general principles and should in no way be confused with the principles themselves” (27-28). Further, he made no claim that these principles should serve to become “any single panacea” (28) that should be applied across all people or disciplines or to all employers. Staying shy of promoting SM principles as a pedagogical theory or plan for the administration of schools, he applied the principles to on-the-job training but did not promise that his or any system of management, “no single expedient - within the control of any man or any set of men” (28) can guarantee a future of continuous prosperity, which he saw to be dependent upon many more factors than any one man, state, or body of individuals can grasp or control.

Taylor also acknowledged the value of “traditional knowledge” (31) handed down from one man to the next from generations before, in terms of something management does not readily possess. Even among the foremen and superintendents, most of whom were workers previously, there was an acknowledgement that they were “better than anyone else” (31), realizing that knowledge and personal skills among management fall “far short of the combined knowledge and dexterity of all the workmen under them” (31). Despite the experience of managers and the task they place before the workers, which requires that they perform their duties according to the time and motion study methods for maximum efficiency, in reality, what they are really asking is that each worker “use his best endeavors, his hardest work,” and access his base of “traditional knowledge” (31) while employing initiative and ingenuity. The problem lay in extracting that best initiative from every worker, not in replacing or rejecting that which has positioned them

to perform well. Despite Taylor's own reservations, the industrial educational paradigm was pushed forward, but not just at the expense of tradition guiding disciplinary language and research; it was also bereft of time, a credible, pre-paradigm component of research.

## **Feature Two: Tradition of Pre-Paradigm Experimentation & Historical**

### **Documentation**

According to Kuhn, paradigms do not form easily or quickly and there are expectations guiding what happens prior to their adoption and by whose determinations. Before a body of theories and methodologies is granted the distinction of a paradigm, according to Kuhn's theory, pre-paradigmatic activities may occur for a number of years. This period of research is vital to the process, a step also not honored in the rapid adoption of the industrial educational paradigm. This period is typified by an exploratory phase in which scientist or academicians conduct both investigation and experimentation among agreed upon classes of facts, often in disparate communicative terms, as they all search for the true nature of whatever phenomenon is under view.

As part of the pre-paradigm phase, again, tradition guiding the field will inform research, but it is also expected that there will be variations in methods and interpretive strategies as well as diverse observations of the particular object under view (Kuhn 14-15). With no established language yet in common, there will also be a range in descriptions, perceptions and interpretations but in the end, they all add to the ongoing dialogic process that will also form future exploration. Scientists and academicians may determine that one body of theories and methodologies are better at answering a research question than others, yet even at this point there may be further discourse to examine the

feasibility of that particular method prior to its becoming of a recognized, shared paradigm (Kuhn 16-17).

Pre-paradigm research is also considered to form an important historical reference that provides insight into the conversation leading up to a discovery. This period is an expected part of the learning process, which is an aspect of post-industrial teaching that Kuhn finds lacking. Textbooks came to reflect the new orientation away from traditional research protocols despite the presence of previous scientific discoveries throughout all scholastic publications prior to the industrial era. Kuhn cites the example of physics as it came to be taught compared to the way it was presented previously. Virtually no references are made to the historical findings of Newton's *Opticks* from which modern understandings of physics has evolved. The language of the discipline has abandoned historical influences and is entirely constructed from the characterizations of research formed during the early nineteenth century to which this research refers, while the fathers of science, including Aristotle, Newton and Franklin, for example, whose works served to: “implicitly...define the legitimate problems and methods of a research field for succeeding generation of practitioners,” (Kuhn 10), are eclipsed.

Scholars today note the absence of the foundational knowledge that a historical understanding of subject matter provides in helping students contextualize information and conceptualize the possibilities for their own contributions to the world. History is the cultivation of the anthropological communicative experience of humans and a defining element within student experience, one that involves the grasping of the evolutionary movement of society toward its contemporary situation and the ongoing construction of the evolutionary cycle of the human race (McLuskie 4-5).

Brian Geiger, Associate Professor in the School of Education, University of Alabama, Birmingham, considers the importance of a historical foundation in student learning and has examined the relationship between the cognitive benefits of “Service Learning” (64-65) and the teaching of history in anthropology. Although he is at odds with traditional methods of teaching and is supportive of the scientific method in application to his field, Geiger recognizes the value a historical context plays in his practice. He emphasizes that while events may be present and operative, students may lack an awareness of the complexity contained within social issues in particular. His work deals with structuring service-learning projects designed to foster the development of critical-thinking skills in association with the study of human-history that is lacking in education today.

Historical context and scientific experimentation are not just factors in making paradigms what they are; they are not simply important in providing insight into the world through teaching; these matters are also important components in the process by which paradigms theoretically change even in the face of disruptive crisis events.

### **Feature Three: Theory as the Basis of Research, Teaching and Learning**

The third feature addressed the abandonment of theory and knowledge as the fundamental basis of research, pedagogy, and praxis. Theory is the basis of all inquiry, whether scientists are operating within one paradigm or travelling along divergent research paths. Their work is guided by theoretical insight, the foundation upon which all science rests, according to Kuhn’s theory of normal science (Kuhn 10), but the questions about the place of theory in scholarship have continued (Hutchings and Huber 229), which appears as a resistance to the idea that theory matters. Increasingly, Hutchings and

Huber argue that universities are challenging teaching and learning scholars in asking for a greater sense of “intellectual lineage” (Hutchings and Huber 230) back through multiple generations, with more connections and more concentration on theory. Citing a call from the International Society for the Scholarship of Teaching and Learning, a 2006 conference with attendance approximated at 700-plus, plenary speaker Graham Gibbs, the then Director of the Institute of Advancement of University Learning at Oxford University, United Kingdom, challenged participants to begin anchoring their work in a foundation of theory. This sentiment has also been voiced by United States faculty developer Maryellen Weimer, author of *Enhancing Scholarly Work on Teaching and Learning: Professional Literature that Makes a Difference*, (2006), as well as Derek Bok, former president of Harvard University (Hutchings and Huber 230). Both of these United States administrators and scholars have called for universities to draw upon the work of others through theory.

Whether scientists are working within different paradigms and share little in terms of language, methods or rules, theory has historically been assumed to be the root of all scientific inquiry and pedagogical practice (Kuhn 10–12) but the “utilitarian” (Callahan 10), “vocational” (Callahan 13) system that was supportive of industrialism did not require a deeper examination of the epistemological foundations of knowledge. At the university level, there is a growing expectation that students will develop the ability to master both an understanding of the epistemology of scientific knowledge and the “process/methods” that are foundational to the development of that knowledge (Zeidler et al. 358).

Theory gives literacy and vision, a “way of knowing” (Zeidler, et al. 358) that relates to the fundamental identity of disciplines which shape their scholarship of teaching and learning practices in modes of inquiry, methods, theoretical approaches and cultures according to their own language, communicative patterns and knowledge structures. These “ways of knowing” (Zeidler, et al. 358) stem from research into questions that continuously add to and further define interpretation of the texts specific to the field and beyond. Bass and Linkon refer to Huber’s and Morreale’s 2002 collection, *Disciplinary Styles in Scholarship of Teaching and Learning*, in arguing that disciplines tend to examine questions about student learning that emerge from specific issues confronting their field and use methods adapted from that body of work (Bass and Linkon 245). Over time, these inquiries result in an internal disciplinary conversation that places inquiry, texts, theory and argument into dialogue through questioning based upon observations that identify and investigate patterns, perspectives and complex meaning structures that are later used to further refine theories and ground students in the language (Bass & Linkon 247)

Gadamer looks to ancient Greek masters in his insistence that teaching theory is the teaching of the “seeing and knowing the order of the world” (Gadamer 454) that is not simply the existence of orders but the “sharing in the total order itself” (Gadamer 454). Translated to practice, this sharing takes the form of communicative patterns that link scholarship, teaching and learning traditions, and habits that are socially constructed and reified into structures. These traditions do not only inform experts within a disciplinary community, they also become visible to students who learn facts and ways of

speaking that are directly associated with the identity of the field (Roxa, Olsson and Martensson 277-281).

#### **Feature Four: Disciplinary Expertise and Industrial Rhetors of Change**

Kuhn suggests that a community of disciplinary peers assumes the responsibility of identifying a paradigm, and they may or may not form some body of agreements through which a body of theories and methodologies might “produce a full interpretation and rationalization” (44) of that paradigm. They may form a shared set of definitions and rules that will provide some general guidance to the field, but they may not set any rules at all. Scientists and academicians may share discourse patterns that may inform how tradition will be acknowledged and represented in the ongoing work of peers, and there may be some consensus as to shared conceptions and metaphors that describe individual perspectives toward research and findings. One important mark of this conversation is disagreement, which is considered to be an essential aspect of ongoing discovery, research, and teaching as the foundation of theory formation.

Industrialists, political figures, and some educators served as the acting body of rhetors in forming discourse through which a new reality would represent social problems as an education crisis. These individuals who participated in the construction of the rhetorical discourse of persuasion, often referred to as “captains of industry,” (Callahan 2) include Andrew Carnegie, John D. Rockefeller, J. P. Morgan. In addition, prominent educators, such as William C. Bagley, founder of essentialism and Superintendent of the Training Department at Oswego, New York State Normal School (*Educative ix*), and



Meyer Bloomfield, of the 1900's vocational guidance movement (Savickas 259) provided scholarly support, while the work of others, including John Dewey, was commoditized by the movement in order to fulfill the purpose of the cause (Tomlinson 365), despite his objections and that of educational experts.

### **Feature Five: Incommensurability in Disciplinary Language and Rhetoric**

On the other side of paradigms is the concept of incommensurability, a breakdown in the "rational argumentative structure" (Garber 405) of communication that can result in paradigm pedagogy, for example. The central thesis to the incommensurability argument is based in the fact that scientists working within one paradigm may be operating from disparate conceptual frameworks, or metaphors guiding their research than other scientists within the same disciplinary peer group (Garber 405). Metaphors become embedded within the mindset and thought structure of a discipline, sometimes as a result of scientific revolution, so that even when a shift occurs, those ideas become attached within the communicative framework and can become incommensurable to paradigms before, just as subsequent paradigms will be incommensurable in the same way (Phillips 37).

Epistemological implications may result in a lack of "rigour, applicability and relevance" to the contemporary context in which the guiding philosophies are structured. Conflicts will eventually develop within social and individual research practice, and "knowledge production" will not reflect the "changing conceptual terrain" or the "'mind-set' of the dominant ontology, axiology, and epistemology of an intellectual community" (Raynor 258). Epistemological structures within the intellectual terrain are influential in

how the language of the discipline is interpreted, resulting in differences in how knowledge is defined and understood.

What is particularly important about the general notion of incommensurability among paradigms in application to the industrialization of education as a paradigm specifically, is that it set forth an inherent incommensurability from all other educational movements before its adoption as a result of its philosophical orientation away from tradition and theory. This shift prohibited the unification of disciplinary language and communication between all research and teaching approaches that moves from those grounds. The impact has been a loss of the epistemological structure of knowledge formation and the fragmentation of teaching and learning characteristic of mechanistic pedagogical methodologies, a result that is highly possible when crisis serves as the motivating force of change.

### **Feature Six: Crisis as a Force for Paradigm Shift**

The rhetoric of crisis and reform is a narrative not only limited in terms of its origin in the industrial rhetoric of persuasion discourse that pushed forward the infusion of a pragmatic philosophy of education rooted in scientific management principles, but the very language of crisis limits the manner in which the contemporary problem of education is approached. Crisis management is a vast area of communication scholarship and, therefore, encompasses many definitions. Because this chapter is working within the language of paradigm theory, Kuhn's definition is most helpful in framing the manner in which communication serves as its central feature. However, other theories that explain the manner in which the rhetoric of crisis discourse limits communication in

contemporary research and practice will also be addressed. Kuhn offers two interpretations of crisis as a tradition<sup>2</sup> of social pressure which can influence whether a paradigm shifts. A crisis may arise from an ongoing awareness that leads to a profound realization within the scientific community that an anomaly that has been in existence for a long time calls for a communicative or action centered response (67). Crisis may also be understood as a social agreement or a condition that is granted the status of a crisis by rhetorical consensus (75), where it is viewed as a necessary precursor to change. In each of these cases, the idea is that a problem does not just suddenly emerge and result in an entirely new phenomenon; there has been some knowledge of its existence for some period of time.

Kuhn argues that even when a crisis becomes the vehicle of social pressure, even where there is an anomaly that has come about in a relatively short period of time, the expectation is that the anomaly will lead to further inquiry. As the basis of “all acceptable changes” (67) in existing theories, there is not a sudden shift to a new theory or the leap to a new paradigm and certainly not the abandonment of all tradition. There is good reason for this. Paradigm shifts bring both “large-scale” destruction to the existing framework and can cause major shifts in the problems and questions posed in the moment. If there is any response, it is a mindfulness, an awareness that something is changing and the crisis event is merely a necessary “precondition” (775) for further

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<sup>2</sup> Crisis as a tradition is a critical attribution theory viewed as the "darker theme" of communication. It is the presence of a communication crisis tendency that is an inescapable nature of the human species simply because communication is both subject to and plays a constitutive role in the total historical experience of the human species (McLuskie, 4). Humans have a tendency to fall into attribution judgments to explain the causes of events. Here, attribution is understood to be a "perception of the causality or the perceived reasons for a particular event's occurrence" (Coombs, 267) and that attribution is typically placed with an individual or group of individuals who should have maintained some control over the event.

research, discovery, and subsequent change. The circumstances can be changed drastically when the public becomes aware of a problem or the issue is characterized as a crisis event that poses substantial threat to the well-being of society. In this case, scientists may have little say in whether the new paradigm has endured the appropriate degree of trial and error.

The conditions facing society at the turn of the nineteenth century, including immigration and migration, were not sudden events, nor were the burdens that resulted new to society. Taxes had been on the rise incrementally, the social and economic climate had been shifting toward a need to match skills with employment opportunities (Button and Provenzo 215-217). In fact efforts to use education as a tool to forward the mutual interest of the country had been seeking balance between societal demands and the rights of freedom, liberty, and democracy since the framing of the Bill of Rights of 1791. There had long been the expectation that schools should reflect and engender a national identity as a means by which the country could evolve as a unit (Butts 44). However, there had also been great challenges in forming a system of public education since the departure of English rule.

Reform had been an underlying theme throughout all of these events, and these aspects of society and culture had been exhibiting breakdowns over an extensive period of time. Also consistent with Kuhn's theory, there had been a framework in place that was already pushing toward solutions to these issues, but movement was slow, perhaps entirely inadequate to achieve the results demanded through the "normal problem-solving activities" (Kuhn, 75) communities and schools sought to implement.

These events posed an opportunity for business leaders to construct rhetorical discourse that would create a crisis in education through public appeal. By merely framing already existing social, political, and economic problems of society as problems of “waste” (Callahan 25) and inefficiency within the schools themselves, while simultaneously asserting “efficiency” (Button and Provenzo 216) as the means toward greater accountability and increased “productivity” (Callahan 25), business leaders and some scholars effectively created the crisis in education narrative. The tradition of crisis as a social force of change became a vehicle for initiating a forced paradigm shift by way of rhetorical persuasion.

### **Crisis Discourse as a Barrier to Problem-Solving**

In its contemporary context, the rhetoric of crisis narrative in the education reform movement continues to be influenced by industrial intent. Ulmer’s and Sellnow’s interpretation provides an important commentary that demonstrates why the rhetoric of crisis<sup>3</sup> language in itself becomes a restrictive force by limiting action to solutions relative to the “moment” (Ulmer and Sellnow 143). Decisions geared toward an unplanned crisis event may direct policies to what is demanded in order to resolve the immediate threat, and the period of time in which that body of ideas remains relevant may not extend across decades. Further, the very nature of a crisis implies that a body of goals, or in the case of education, a good, has already been determined through rhetorical consensus (Ulmer and Sellnow 143), but as this research asserts, no rhetorical consensus of a good in education has yet been defined.

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<sup>3</sup> Ulmer and Sellnow refer to a previous study conducted by Seeger, Sellnow and Ulmer, which defines a crisis as “as specific, unexpected and non-routine event or series of events that create high levels of uncertainty and threaten high-priority goals” (Ulmer & Sellnow, 144; Seeger & Ulmer, 369).

Nielsen and Dufresne also state that where there is a true crisis, that moment should serve as an opportunity for the dialogic process to yield recognition that a common good must be defined and that organized efforts must be constructed that engage solutions designed to achieve that goal (311). No doubt, the conditions confronting society at the turn of the 20<sup>th</sup> century did bring forth a time in which the country was brought to a rhetorical pause, as business leaders and school administrators attempted to formulate a plan that would position education to be responsive to the conditions of that time.

There was a Kuhnian notion of a crisis, but not the type Ulmer and Sellnow or Nielsen and Dufresne describe, which is the argument business leaders of the industrial era argued to be in force. It is also not the case that education as a whole could have remained in that state perpetually to the present day in light of its adherence to industrial philosophies. What the industrial education crisis narrative succeeded in achieving is the framing of a system of education geared toward the an industrial “ends” (Wahlstrom 432) valuation, where knowledge is necessary for the building of an industrial life. What has resulted from this refocusing of purpose is an outcome to which Kuhn refers when a crisis drives the transition from one paradigm to another; what manifests is left to future generations to resolve (Kuhn, 84).

### **Feature Seven: The Interdisciplinary Application of SM to Education**

Prior to the scientific management influence, no other paradigm this research has examined has been as widely applied. Its reach extends across every aspect of society, and culture and its interdisciplinary application is unprecedented in terms of the reach its principles and guiding metaphors would hold in the structure of institutions, and the

direction of research, teaching and practice. The “one best method” (Koerner and Patelle 25) principle within scientific management has come to be associated with any task-related activities, bringing hierarchical, planning, command and control to educational institutions across all disciplines, effectively removing any remnants of a knowledge based focus as the purpose of education.

Schools were organized by principles of “efficiency and accountability” that had previously been applied to businesses and these metaphors became the basis for “educational reform” (Koerner and Patelle 26). Education was redirected toward an economic orientation across the world, that would quantify “per-pupil costs and pupil-recitation costs” (Callahan 73) with other estimated “products or results” that associate percentages with enrollment, annual attendance, “the average length of time required for each child to do a give definite unit of work” (Callahan 69), educational equipment, and the “quality of education” (Callahan 69). The desired fiscal outcome was “maximum service at a minimum cost for every school and in every subject” (Callahan 74).

Institutions of higher learning are also characterized by centralized decision-making structures, classified by nine “bureaucratic university” (Reynolds, et al. 91) attributes that are typical of the “industrial organization complex” (Reynolds, et al. 91): high micro-specialization, creation and dissemination of knowledge, organization of academic disciplines, hierarchical leadership structure, ordered management levels, rational and deductive decision making, quantitative measurement systems that are highly monetized, formal control systems and codified policies and procedures. This research must make a disclaimer in its departure from the assessment of what is industrial versus what is traditional in the disciplinary alignment of academic subject matter, which this

project has exhaustively demonstrated is not characteristic of industrialism. Rather, as Chapter 3 has demonstrated and the next section will address in its discussion of metaphors, subjects have become fragmented from their disciplinary structures as a result of industrialism, while universities have largely retained a commitment to the tradition of disciplinary structures.

The relevance of scientific management as a continued presence in terms of administrative functions, curriculum design and implementation across all disciplines is directly related to scientific management metaphors that have come to direct policy, administration and pedagogical approaches. Metaphors are not just figurative language; they are a powerful device by which thinking and action are formed.

### **Metaphors: Meaning and the Mechanization of Learning**

#### **Meaning and the Cognitive Effect**

In addition to Kuhn, philosophers such as Wittgenstein and sociologists Mills and Mannheim have made important contributions to the work of paradigm theory with some variations in their concentrations. Among all of these scholars, Phillips notes their treatment of paradigms centers on metaphors that describe how paradigms influence thought patterns and beliefs. He asserts: “ They all have stressed, albeit in different ways, that men think in terms of the intellectual and social 'frames of reference,' 'universes of discourse,' 'language games,' and 'paradigms' available to them in their own culture and group” (Phillips 37). Meanings within language are viewed as fluid, taking form by virtue of relationships that exist with the systems and relative to the group or circumstances in which that language is developed at a disciplinary level.



Ricoeur finds a “duality in function” (Ricoeur 12) in the use of metaphors in referring to Aristotle’s theories of rhetoric and poetic, both of which move from separate intentions; one is designed to hold a persuasive intent and the other a mimetic effect, respectively. The origin of the mimetic function of metaphor stems from Plato, (Kirby 53), which, of course, Aristotle expanded upon in his rhetorical theory. The idea that metaphors carry meaning or, rather, “carry across” (Kirby 532) an idea from one point to another means in a rhetorical context that the name of one thing as a literal term can be transferred to a new term that remains highly figurative.

The reach of metaphors also extends to public understanding of issues, awareness of teaching and learning approaches and perceptions in regard to entire philosophies, practices, and epistemological orientations of industries as well as the actors who participate in their construction and implementation (Christidou, Dimopoulos and Koulaidis 347). Ideas evolve through a process of continuous “circulation and communication” where scientific principles, in particular, are often “metaphorically described” and may even reflect the epistemological position of an entire body of theories (Christidou, Dimopoulos and Koulaidis 348). By examining metaphors, it also becomes apparent that the historical conditions of any given time become embedded within all communication and action, but it raises a problem in maintaining the educational needs of an evolving society.

Sheehan argues that the true significance of metaphors is much more than the traditional notion which limits metaphors to mere “fancy clothing on the language of reason” (50). His view is that metaphors have a “rhetorical-hermeneutical” function in that they can actually shape our thinking and create meaning; they are a device that

enables the seeing of something in terms of something else, a “reconceptualizing” effect that can actually change one’s perspective of something from one thing to another.

Although Keysar and Glucksberg disagree with this notion, arguing that people retain the ability to distinguish between the literal and figurative aspects of an expression (Keysar and Glucksberg 633), there are theorists whose research demonstrates that metaphors do have a cognitive effect.

Sheen refers to Richards’s Freudian based “psycho-linguistic theory” and Black’s “interaction-cognition” to illustrate the interpretive nature of metaphors as they work to create new meanings as a result of a mental interaction that takes place in the individual mind of the interpreter. In this "interaction" view of metaphor, Richards suggests that "metaphors work, or create meaning, by bringing two thoughts...into contact with one another, causing their distinct meanings to 'interact' in the listener's mind to create a new meaning that is not paraphrasable into literal terms" (50). In this scenerio, "the interpreter of the metaphor, much like an interpreter of a dream, would then work out the ambiguities and connectives inherent in all words, or thoughts, to create a non-literal meaning" (50), a "psycho-linguistic" manifestation of metaphor. Essentially, metaphors work by "psycho-linguistic" (50) effect where words or thoughts are combined to create a mental interaction in the mind of the reader in the interpretation phase.

### **Changing Contexts and Meanings**

The value in terms of the industrial educational paradigm is that metaphors can change, but sometimes they hold to their original construction in context and meaning (Miall 22; Maclver 61). Metaphors are an extension of customs and cultures; they can be ethnocentric in the expressive, communicative role they serve in assimilating facts or

establishing a meaningful connection to reality (Sandor 101). Those aspects of metaphoric language that are most intriguing here are those guiding the scientific management infusion into education, which have retained much of the meaning as it was constructed during the early 20<sup>th</sup> century. Sheehan provides an important example that demonstrates this point.

By taking the concept "time" (Sheehan 48) as a metaphor, Sheehan illustrates how the meaning of a word can be framed through a lens of understanding according to the manner in which the word is used. A common association that is often made with time metaphors has to do with the notion of time slipping away, or time as movement. However, if the desire is to move the meaning of time away from the notion of something that is passing, the metaphor or metaphorical phrase is simply changed. An industrial scientific management interpretation of time frames time in the context of metaphors such as waste or refers to the state of time as "time is money" (49), which holds value as something to be lost or saved through the "efficient" use of time. So, if we are efficient we can find a way to either gain or make time, but if we are not efficient, we will run out of or waste time. Here, Sheehan argues that, depending upon the outcome sought, a metaphor can be used to persuade us as to what time actually is. Metaphors "preserve and change perspective" (49) and even "guide how we think and talk about temporal issues" (49). There can also be the effect of "layering" (49), where various root metaphors frame our thinking and perspectives of temporal issues.

Sheehan's example demonstrates the foundation of Frederick Taylor's scientific management principles, which are driven by "standards that seek to quantify man's capability to perform to a certain degree of efficiency. This system was a

rewards/punishment based approach to allocating wages commensurable to a worker's output with failure to produce at that rate resulting in the eventual discharge and replacement with others who would uphold the standards (Taylor 21). The elimination of "slow work" (Taylor 24) or "soldiering" (Taylor 15) was at the heart of these strategies based upon the "greatest prosperity and production" metaphor that says: "No one can be found who will deny that in the case of any single individual the greatest prosperity can exist only when that individual has reached his highest state of efficiency, that is when he is turning out his largest daily output" (Taylor 12).

These standards were deemed to be "scientific," and "time" and "motion"(Taylor 24) studies were designed to precise methods for defining every detail of the work performed in any trade. Taylor believed the study of time and motion could produce precise calculations that could measure the exact amount of time required for output of any given task and any "unnecessary" or "inefficient" motions could be eliminated for the most efficient ones. Time and motion studies were used to identify the many different ways men achieve the same task and to find those that are common in the performance of the same function. From the "forty, fifty, or a hundred" (Taylor 24) possible ways there are of doing any given act in the respective trade, combined with the variety of implements or tools used in each case, there can be one method and one instrument that emerges as the fastest and most efficient among them all (Taylor 24).

Frederick Taylor's time and motion studies, along with the metaphor of "efficiency" associated with metaphors of "waste" and "competency" (Taylor 6), can be located directly within current reading fluency measures that associate time with reading fluency and comprehension. Deeney cites the implementation of "one-minute fluency

measures" (440) adopted as a result of federal policies associated with the National Reading Panel's recommendations that teachers regularly assess reading fluency. Deeney refers to *The Literacy Dictionary* (1995) in defining what fluency is and how it is measured.

According to its authors, Abadiano and Turner, of Centry Connecticut State University, fluency is understood through scientific management production metaphors of "efficiency and effectiveness" (Abadiano and Turner 50). Questions are emerging in the field of education, however, as to whether fluency does translate to comprehension, which is the current view according to the National Reading Panel. The standing definition for reading fluency, which Abadiano and Turner cite from *The Literacy Dictionary: The Vocabulary of Reading and Writing*, asserts that fluency is "freedom from word identification problems that might hinder comprehension, or the expression of ideas in oral reading; automaticity" (51). Measures employed in moving students toward expected proficiency involve such practices as "re-reading" (52) where students are required to: "read a text repeatedly until they achieve a designated rate (of speed and accuracy) and then repeat the process," reading that is not "word-by-word" but by the grouping of words, and students are not challenged to read beyond their "reading level" (52). Misreading words, substituting words or reading at a rate considered to be below one's grade level is believed to be a lack of comprehension (Deeney 440).

While metaphors of the industrial paradigm continue to guide educational policy, metaphors of the contemporary technology driven society appear to be turning back to a focus on "knowledge," "knowledge building," and "expansive learning" (Paavola, Lipponen and Hakkarainen 557). In general, metaphors impact the social practices and

organizational structures in terms of how information is collected, interpreted, and used in future research, and they also define the very construction of artifacts relevant to the period.

### **Historical Discourse as a Framework for a Modern Rhetorical Situation**

#### **Rhetorical Discourse in the Mechanization of Administration, Teaching, and Child Life**

The mechanization of the environment and the child marked the beginning of the present-day duality that exists in schools, which is a problem of recognizing the child as a machine of production or as a human face. In examining how education came to be mechanized, three groups of scholars emerge as prominent in their treatment of the subject: Raymond Callahan, author of *Education and the Cult of Efficiency*, H. W. Button and Eugene Provenzo, authors of *History of Education and Culture in America*, and William C. Bagley, author of *Educative Process* and *Classroom Management*. These individuals all provide accounts of the way SM principles were applied in bringing the efficiency movement to administration and teaching. However, William C. Bagley, founder of the essentialism movement and Superintendent of the Training Department at Oswego, New York State Normal School, authored several publications geared toward the elimination of “the waste of time and energy that is involved in the work of the school” (Bagley, ix). Bagley authored several books on the topics of teaching from various perspectives, including *Educational Values*, *The Educative Process*, *Classroom Management*, and *Craftsmanship in Teaching*, in which he outlined an intention for the purpose of education. Generally his scholarship as can be characterized as a philosophy

of scientific management in education. Bagley speaks of the origin of the practical as a value found in the informal practice of everyday life experience, which he acknowledged was largely “unsystematic” and “uneconomical” (*Educative* 25) in its primitive state. He captured the “division of labor” (*Educative* 28) functionality of informal experience, applying its more practical aspects to formal education, believing that schools should strive to meet the ultimate end of education as its primary outcome, not as a lifelong pursuit. Bagley cited two directives: the “bread-and-butter aim” (*Educative* 44), designed to provide an adult focused education toward a future of earning a livelihood later in life, and honoring the notion that “individual advancement means social advancement” (*Educative* 45), which he later refers to as “social efficiency” (*Classroom* 8).

As time went on, Bagley’s scholarship became more extreme in its commitment to efficiency. Within *Educative Process*, he argues that a practical education is not mutually exclusive of a knowledge focus, citing that the short-sighted elimination of a knowledge aim for a practical aim is likely to result in a “narrowness of spirit” (*Educative* 45) that can produce a dangerous mental attitude due to the inflexible adherence to processes and standards. Arguing for balance, Bagley refers to the theoretical underpinnings of knowledge as found in “facts and laws and principles” that in themselves have a utility. However, as Bagley’s scholarship progressed, he aligned his philosophies further toward scientific management principles.

By the time of *Classroom Management*, Bagley begins to articulate a staunch allegiance to metaphors of production, referring to the progress of the group being dependent upon the progress of the individual, system, and organization as the “universal solvents of the problem of waste” (*Classroom* 13) as enhanced by the product of habit

and habits of the mind. Bagley also cites the law of habit-building as the “focalization of consciousness upon the process to be automatized, plus attentive repetition of this process, permitting no exceptions until automatism results” (*Classroom* 16).

Increasingly, Bagley’s research looked toward mechanizing every task, every function toward routine, often devoting entire chapters to the organization of schools as a physical system, treating teachers as mechanical components within the infrastructure. He even addressed psychological and emotional control over teachers and students as “emotionalized standards” (*Educative* 54), summarizing the “mental construction” (*Educative*, 38) and “assimilation” (*Educative* 37) of conduct. Bagley promoted the organization of every function of teaching, from classroom management of materials to curriculum and hygiene. He addressed every task designed for learning, with routine and habit as the foundation of process teaching designed to move as close to making a school efficient enough to “go like a machine” (*Educative* 36).

Bagley employs highly persuasive strategies in promoting the practical in education by first identifying what should be classified as “form studies” (*Classroom* 55), reading, writing, arithmetic, spelling and language as opposed to “content” subjects, including many humanities, history, and science courses. He asserts that evidence shows that students who have spent too much time on “content” studies are weak in the practical requirements they need after school, suggesting that “content subjects should be sacrificed” (*Classroom* 55) in favor of form studies, which should comprise the majority of a school day’s work (*Classroom* 64). Employing a pathos driven ethnographic account as empirical evidence, Bagley’s supports this “useful” (*Craftsmanship* 98) focus in education by recounting his own experience of having attended college, following a



program in agriculture and graduating only to find the problem of making a living still before him due to his unfortunate lack of capital and the hard times in which he and other farmers were situated. Ultimately, in his rhetoric of utility, Bagley discounts the theoretical study of scientific and technical knowledge as only a means of recreation, an “investment in time and money” that has yielded not “one per cent” (*Craftsmanship* 100) of the expenditure. Bagley’s influence and the industrial philosophy of usefulness is still felt in the continued presence of production metaphors guiding educational practice today.

### **Contemporary Connections to the Mechanization Movement**

Education administration scholar Thomas Sergiovanni, who studies the metaphors of educational administration, examines leadership, the manner in which schools are structured and coordinated, the rules of compliance and how schools go about achieving goals. Although Sergiovanni does not establish the link, the theories and metaphors he identifies as guiding policy in schools, which he asserts to be characterless organizations, merely borrow existing "mindscape and models, concepts and definitions" (Sergiovanni 214) from sources outside of education, are derivative of scientific management. He points to the metaphor "organization" (Sergiovanni 215) in describing the formal nature of schools that make them closer to professional organizations than learning institutions, believing the theories of organizational behavior to be more appropriate to their function, operation, and structure. The metaphor "to organize," which means to arrange things in a coherent manner, is problematic when applied to schools in contemporary society because this message is detached from its original industrial intention. The design of schools simply does not make sense anymore. This is in part because “organization”

implies something that is defined, but schools as organizations now lack definition and relevance and therefore have no reason to hold to an SM model.

Even though scholars may not recognize or refer to the link to scientific management in schools, they do identify a basis for educational policy metaphors that are derivative of SM, in organizational strategies designed to increase "quality, productivity, and efficiency" (Sergiovanni 215), "achievement," "material growth as success," "inefficiency" (Callahan 2-3), "progress," and "program assessment" (Reynolds, Lusch, Cross and Donovan 93). These concepts are associated with Taylor's perception of human nature and motivation as limited to self-interest and the pursuit to "maximize our gains and cut our losses" (Sergiovanni 215).

Today, scientific management metaphors continue to guide the rhetorical presuppositions about education and legislation that directs educational policy and pedagogy toward short-term, school based learning initiatives driven by paradigm pedagogy. Guisbond and Neill, principals with a nonprofit organization whose mission is stop the misuse of standardized tests and promote fairness in evaluating both teachers and students, examine the No Child Left Behind (NCLB), the most recent legislation that has come under serious scrutiny among educators. The goals set forth by NCLB are clearly formed around a rhetorical framework that limits the primary focus of schools to standards, time, and efficiency as located in good test scores.

Within NCLB legislation is an underlying performance centered narrative that frames students and teachers as failures according to production and performance requirements for desired test scores. This orientation also originates with Taylor's notion of "maximum efficiency as prosperity and excellence" (11). However, Guisbond and

Neill insist that this system is constructed upon a foundation of a "test-and-punish methodology" (12), which is also consistent with Taylor's "Initiative and incentive" (33) principle: no manager can hope to bring about the best initiative in the performance of any worker without providing "some special initiative to his men beyond that which is given to the average of the trade" (32)

Helterbran looks to the research of Harvard Graduate School of Education Professor Richard Elmore in defining the fundamental problem with No Child Left Behind. No Child Left Behind is certainly not the first legislation of its kind to be adopted nation-wide, but scholars find it to be particularly destructive at the "core" (12) because it places an association between testing and sanctions that are aligned with an "adequate yearly progress" (AYP) formula that is not in any way guided by proven theory, according to Elmore. Helterbran argues that the AYP requirement, enforced by the mechanism of accountability provisions that guarantees failure for a majority of U. S. schools, is "a completely arbitrary mathematical function grounded in no defensible knowledge or theory of school improvement, which could, and probably will, result in penalizing and closing schools that are actually experts in school improvement" (13).

The guiding mechanistic pedagogical metaphors of No Child Left Behind demand that students achieve "proficiency" in designated levels, but Guisbond and Neill argue that only "one in three" (13) American students now score at the proficiency level dictated by NCLB for reading and math. The problem is that educators recognize standardized tests as unreliable predictors of failure or measures of success because they only show a mere "snapshot" (13) and a "fuzzy one" at that, of a particular learning moment. More importantly, Guisbond and Neill fear that NCLB has further fueled the

national rhetoric of crisis and reform reflective of the same rhetoric of crisis that was constructed during the industrial revolution.

### **Summary**

The contemporary problem of education and its historical development as a system serves as an example of a collision between the principles and values that are communicated through scientific management metaphors of production and those that are evolving within new paradigms that challenge the mechanistic nature of education. American society as a whole has changed, and the metaphors guiding infrastructure, research, and business are now founded upon complex science, high technology, and global interdependence.

This research argues that paradigm pedagogy, specifically industrial education paradigm pedagogy, is still alive and relevant in the contemporary rhetoric of crisis discourse that frames educational failures in the context of scientific management metaphors of production. Not only is this focus limiting in terms of school-based policies, but the mechanization of the habits and minds of children has created a serious duality in education. The next chapter will address what results when education pushes the child further toward mechanization but the adult world of lifetime learning calls for imagination and creativity.

## CHAPTER 5

### Dualism in a Mechanized Educational Culture

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*The only freedom that is of enduring importance is freedom of intelligence, that is to say, freedom of observation and of judgment exercised in behalf of purposes that are intrinsically worthwhile. The commonest mistake made about freedom is, I think, to identify it with freedom of movement, or with the external or physical side of activity. Now, this external and physical side of activity cannot be separated from the internal side of activity; from freedom of thought, desire and purpose. The limitation that was put upon outward action by the fixed arrangements of the typical traditional classroom, with its fixed rows of desks and its military regimen of pupils who were permitted to move only at certain fixed signals, put a great restriction upon intellectual and moral freedom. Strait-jacket, and chain-gang procedures had to be done away with if there was to be a chance for growth of individuals in the intellectual springs of freedom without which there is no assurance of genuine and continued normal growth. (Dewey, 61)*

#### **The Hermeneutical Entrance of the Researcher**

This research has examined the historical origins of the contemporary rhetoric of crisis and reform narrative that underlies public discourse about education in the United States. Two primary issues have emerged through this inquiry: the continued dominance of the industrial educational intent in contemporary public school educational policy, administration, pedagogy, and practice and the persuasive power competing, social, political and economic forces hold in limiting the scope and purpose of education. There has been little interest in defining how education may be redirected toward the lifelong needs of the student as the foundation for securing the success of a changing society.

As a result, a great loss is now being felt in the everyday lives of students who are placed in the position of performing in order to give proof that these cross-directives, representative of the multitude of voices in the conversation, are achieving an arbitrarily defined body of outcomes. While this dialogic battle is

waged over who should control what students learn and by what means, education moves further away from any meaningfulness as pedagogical methods shift more deeply into constructing methodologies that teach students to reproduce processes quickly for the purpose of accountability and assessment. These strategies are bereft of any foundation in knowledge and experience as the basis of all discoveries.

These methods have also served to further widen the gap between the learning continuums of primary, secondary and post-secondary institutions as more students emerge from the K-12 system with serious learning deficiencies. Institutions of higher learning are left struggling to be responsive to the expanding remedial needs students present in an effort to provide an opportunity for individuals to liberate themselves toward a better future, but it is not an easy task for students or instructors. As a result, students, who should be the lifelong beneficiaries of the kind of education that will enable them to meet changing educational needs over the course of a lifetime from a position of preparedness, enter the adult phase of their education with a disadvantage.

In speaking to the experience of the student, this chapter will provide an ethnographic account that will document some of the personal and professional observations of the researcher, whose perspective is informed and shaped by knowledge derived from both sides of the learning continuum. This researcher, therefore, makes a hermeneutical entrance to the education discussion as a parent of children who are products of the public school system and as an instructor who has taught both remedial and advanced level courses in several prestigious institutions of higher learning. This chapter will attempt to articulate the circumstances in which

students must function in their struggle to liberate themselves from the dialogic battle evidenced in the ongoing crisis and reform narrative, which they understand to be outside the scope of their interest.

### **The Humanization and Dehumanization of A Child's Life**

There are two bodies of scholarship that have proven invaluable from a theoretical perspective in understanding the effects pragmatic-scientific methodology and competing individual interests have had upon students: Paulo Freire's *Pedagogy of the Oppressed* and John Dewey's *Experience & Education*. Both foretold what would result when knowledge, as a means by which freedom may be realized, were removed as a possibility of learning. They describe a state of emotional and intellectual trauma that would come to typify the ordinary existence of all men as an effect of this modernist aim toward progress. But the power of their voices lay in their ability to describe from the perspective of the person, of the child, what even he cannot understand or verbalize, but does recognize at the moment of realization: that school life is one of oppression. It is a temporal instant in which the duality of dehumanization and humanization are both realized in the co-existence of each of these vocations, simultaneously occupying space while, ironically, creating a void in the minds and hearts of children.

Children understand the disparities in these ways of living, not because of anything they are told but by the very "ontological possibility" ( Freire 43) of dehumanization, which raises one's awareness that humanization is one's natural given vocation. While Freire describes this as a central theme of all humankind, this phenomenon is most relevant to a child who spends his industrial school life in an atmosphere that is entirely without meaningful learning encounters. It would appear to be

a generalization to suggest that all children share this state of being in common and, in fact, they do not. But the theme of duality is one I have observed in both my children and my students who have struggled to survive the cycle of performance and pressure in the ever-demanding calls for accountability and assessment that dominate the public school reality.

Freire asserts that all humans must make a choice when faced with a life of oppression such as this: give in and accept the conditions of what this research argues is a mechanized existence and become one with the oppressors, or stand and fight for liberation. In my experience as both a parent and a teacher, the outcome is more often a combination of both. Children are no different from adults, whose long-term exposure to systematic oppression can leave them gripped with fears that prevent them from realizing the potential they have to liberate themselves through knowledge even when they have made the decision to do so.

### **Industrial Systems of Oppression: K-12 Indicators of Mechanistic Pedagogy**

#### **Mechanical Process Teaching**

Although at the time I was completely unaware of the connection to what I would begin to observe, my children were, in fact, living through the “either-or” (Dewey 17) conflict that places traditional and progressive education in opposition. Even though what we would experience would remain unnamed in theoretical terms, my awareness that something was terribly wrong in the system was alerted very early in my children’s school lives. They were both challenged once they began kindergarten to conform to the sterile, mechanical environment that forced them to reject their own nature as creative, dynamic learners. Both of them talked early; both were very receptive to complex



activities, and each of them exhibited enormous academic potential even prior to preschool. They each responded to intellectual stimuli with great capacity and focus when introduced to any new subject. Most importantly, they were tremendously happy children who loved to learn. This all changed once they entered the public school system.

I struggled to determine the cause, but I did not become entirely aware until later grades that within the curriculum and the atmosphere, there were serious and fundamental problems. Like many others, the rhetoric I was hearing in public discourse located the source of the problems I was witnessing, in the curriculum and in my children, with teachers, and I did see issues that disturbed me, but I also saw something much deeper. As my son is two years ahead of my daughter, these observations formed primarily from his experiences, but my daughter's encounters only confirmed that the problems I located were not specific to my son. Both children exhibited extreme frustration over time and growing lack of interest in school, which always surrounded daily homework time and the weeks in which standardized tests were administered. A theme evolved, which I immediately observed at the level of the curriculum. The lessons seemed to have no particular goal, were not given in any specific order, and did not appear to have any relevance to material presented from one day to the next.

Further, nothing was discussed in depth and the assignments were often very advanced, appearing to make great leaps between what should be the starting point in introducing a new lesson to what would come next. There was a method of skipping between completely isolated concepts and processes and the unification of too many different subjects in any one week. Often, a particular subject would receive no

introduction at all, but rather a fragmented process, extracted from the larger story, would be taught following the discussion of some other process or directly before something else. Also, I noted generous assumptions being made regarding the base of knowledge they most certainly needed to possess in order to complete the projects and daily tasks. The assignments assumed that a foundation in knowledge was already in place that would enable students to complete advanced level tasks; it was another instance in which the integration of subject matter created a gap in key areas.

### **Teaching by Template and the Rebellion of Creativity**

For example, having very little exposure to sentence writing, let alone paragraph construction, during the second grade, they were expected to write monthly book reports and complete advanced projects depicting a scene from the story. The skills required for this level of engagement certainly surpassed their experience, and there were other, very odd, aspects of the work that became obvious. For every project, they were given detailed instructions for the project in the form of a template that defined not just the goals for the assignment but detailed steps for its completion, which included a picture of the final project showing exactly how it should appear. As creative thinkers, this template was disturbing for them and for me.

They were also expected to understand the notion of a deadline, remembering each and every month when the reports and projects were due because initially, no reminders were coming to me, the parent of this six year old child. Upon inquiry with my son's teacher, as he is two years ahead of my daughter, as to why this was the case, I was told that they were being trained to follow directions and produce assignments as expected. This policy would later make sense, in Dewey's argument that children are

forced into “mature or adult products” (Dewey, 19) that create such an enormous gap in the ability of the child and the exercise that he is prevented from enjoying any active participation in the development or creative interpretation of the lesson.

As any parent in this situation might, with the first report and project, I made several assumptions. I believed the instructions he received were only intended to provide a set of guidelines, albeit very advanced, but intended to articulate what an assignment like this might involve in the future. So, we employed creativity, making our own scene. And yes, I had to help because there was no other way a child of his knowledge and skill level could possibly complete the lesson on his own, simply due to the mechanics of cutting thick boards and using other tools not appropriate for his age and figuring out how to deliberate in finding a solution when aspects of the assignment did not work according to the instructions.

My next assumption was addressed in the response of his teacher. I believed any educator would be excited by his creativity and reward him for his initiative but we both learned the hard way that the process must be followed exactly when he received his first unsatisfactory grade for turning in a wildly imaginative and exciting interpretation of the scene but not according to the exact instructions: the template. I thought that maybe he was simply being introduced to the notion of following directions in preparation for handling more complex subject matter and assignments. If that were the case, then this part of the experiment should end within a short period of time. It did not. The problems continued from that point.

Other problems arose with the integrated language arts focus, and the fact that it is not referred to as English is not just a matter of semantics. I was told not to correct

spelling errors, because children are encouraged to spell as they hear the words rather than learn to associate pronunciation with phonetic spelling. They also spent little time on grammar, and in fact, any study of the parts of a sentence, their proper arrangement or their roles, such as modification, was only cursory. The focus was on stories, teaching them to identify and construct a thesis statement, write a narrative, and identify the plot of a story. Many steps were skipped between these exercises and the processes involved in learning how one arrives at a whole story. Every subject was approached through this fragmented, forward leaping fashion.

### **The “Tornado” Effect for Mathematics Instruction**

Both children struggled with a bizarre “Everyday Math” program just as they had with the integrated language arts curriculum. Math was not traditional in any way; it was a new math that did not teach addition, subtraction, division, multiplication, or fractions from the beginning or at any point to any great detail. There was no in-depth study of fundamental skills. Rather, students were introduced to many concepts in a process referred to as the “tornado effect,” where the subject matter changes every day; taking only fragments of subjects from larger discipline identities and putting them together in an arbitrarily constructed lesson plan. For example, one day, they would learn the process of finding the mean and median from statistics, while the next lesson focused on finding the area of a geometric shape before moving on to entering data into charts or determining ratios.

My children could learn and repeat the process but they could not associate any one of these tasks with the disciplinary story. Nothing made sense to them. Nothing had a story that started from the beginning and moved sequentially toward the next idea. Every

lesson was progressively more removed from any order or arrangement of the subject matter, and in helping them with homework, I had no way to know where to start in trying to help them figure out how to do the activity. What made the problem worse is that everything I had learned and my husband, who is a math wizard in his own right, had studied did not apply because much of the material was taught through short-cuts that eliminated critical steps in the organic flow of the process. We even resorted to calling my brother who is a highly respected professional engineer for a respected engineering firm who is known for reading abstract mathematics books for leisure and even to him, this math made no sense.

The math we knew was gone, and mechanical process teaching became the order of the day. While my children learned, we had to learn new, convoluted ways of solving problems. The goal was clear: quick identification of the process, meaning my children were supposed to know immediately upon viewing a data chart that there is a way to enter data and when they have an input column, they quickly learned how to generate output and vice versa. This skill became essential in preparing them for quizzes and tests. They could not spend time trying to figure out problems; they had to know the process and quickly reproduce that process on exams, which I later understood to be preparation for standardized state testing.

### **Math the “Right” Way Was an “F”**

There were other odd departures from traditional math, which I could not have come to understand absent the experience of the new math. As Chapter 3 indicated, in learning, there is a need for balance between mechanistic and organic process teaching, where the student learns the steps by which a particular task is completed in learning the

story of a subject, which does involve some rote memorization. Once the student has that foundation of knowledge, he develops the ability to repeat that process quickly and can even abandon those steps later in more complex activities. The new math does not recognize any traditional ways of doing an addition problem, as an example.

Rather than teach students to solve an addition problem with multiple addends by lining up the numbers in a vertical, linear pattern, each number in its respective place, my children were forced to round the numbers and estimate, adding remainders at the end. This made no sense to them or to my husband and, in addition, it actually took longer for them to complete problems, so we taught them the “right” way, which involves simply lining the addends vertically and adding them, and carrying numbers over to solve. Not only did they immediately understand, but they were accurate in their calculations, missing very few problems. However, we quickly learned that teaching them the “right way” would result in an “F.” We were told that our children had to learn the new way under the justification that it was faster and more accurate. I understood that this, too, grew out of the standardized testing need for high productivity with little time.

From grades one through five, my children spent no time on basic algorithms. Each arrived at grade five having no ability to do basic math. They both determined, like the children of other parents with whom I spoke, that they simply were no good in math, which changed once we began to homeschool during their fourth and sixth school years.

### **Fragmentation of the Disciplinary Story and the “Experiential Continuum”**

I was also bothered by the fact that my children were not allowed to bring textbooks home and in fact, when I inquired, I was told they were not used for most classes, which made determining the extent of what I believed to be a deeper problem

very difficult. Everything appeared in handouts with little or no instructions or examples from which parents could even sort through what these new techniques entailed. When my son entered the sixth grade, I finally saw a mathematics textbook and was shocked by what he was being taught, which I deduced from the content and the manner in which the material was arranged. Lessons were vague, unrelated from one lesson to the next, and concentrated on process. For example, in one such text, unit three focused on some processes associated with statistics and graphing, units four through five centered on some algebraic expressions, and unit six was all about geometry.

Neither of my children's learning styles could be accommodated by these methods, but I now had in my hands pure evidence, and it spoke volumes. I began to make connections. I had been told numerous times that my son could not learn unless someone worked with him one on one. This did not match my own experience with him; if he learned steps and was given the opportunity to apply and experience the material, he learned very well and quickly. For both children, the current educational situation was not working on an emotional or intellectual level as their frustration continued to grow and my awareness turned to a recognition that they were moving further and further away from ever having the opportunity to take advanced level mathematics courses. I feared they might never advance to higher education.

While there are many other examples I could provide that detail similar issues in other subjects, ultimately, my family determined that if our children were ever to have an opportunity to advance to college, we had to remove them from this environment or they would never develop the knowledge they would need to have a successful college life from an academic and emotional standpoint. There was a host of other issues with the

methodology, the environment, and the pressure placed upon each child to adopt the learning style required to produce and perform.

There are so many issues to consider in describing the problems that it is much too vast a topic for this project to tackle. However, it should be noted that administration attempted to strong arm my family into making our children conform to the accepted style of learning through tactics such as medication and emotionally abusive behavior from teachers and administration when met with our resistance to that proposition. There was a range of other problems associated with methodologies, philosophies, and bullying that made the overall environment uninhabitable. All of these factors influenced our decision to withdraw our children from the situation.

At this point, I understood what Dewey meant when he suggested that the “continuity of experience” or “experiential continuum” (28) upon which experience evolves, and I knew that my children were systematically being taught to hate the experience of school. Their everyday encounter with learning and the environment were building upon “mis-educative” (25) experiences that would ultimately have the effect of “arresting or distorting” (25) what my children came to believe about education. I had already become aware of the strong correlation Dewey made between experience and education in that experiences can engender an attitude of callousness, a lack of sensitivity or responsiveness in arguing that “education is a development within, by, and for experience” (28), which can create a desire within the child to learn or ruin any possibility that learning can be an enriching opportunity.



## **Rhetorical Interruption in the Life of the Researcher**

### **The Cyber School Experiment**

My family, like thousands of others across the country, ultimately decided that our only recourse was to remove our children from the face-to-face public school system and give cyber- school a shot. Both my children were at a place of emotional collapse, particularly my son, who fell into a dark place of depression and hopelessness. However important this decision was in changing their lives and providing for them an opportunity I knew they would never otherwise obtain, this was a terrifying moment for me as I realized that this situation had the potential to derail my research and certainly prevented me from accepting adjunct work. But my first commitment is to my children, so I knew what had to be done. I had no idea that I was actually being granted entrance into true knowledge of the kind I could never have imagined as the researcher in me came to the forefront.

First, I learned of the magnitude the cyber school movement had reached as I began to research the options. I spoke to school enrollment counselors, taking notes on every piece of information I could gather. I learned that in the state of Pennsylvania alone there are upwards of one hundred fifty private and public charters, some with enrollments as high as ten thousand students. Many are considered public schools and are therefore free because they fall under the same regulatory requirements for testing as face-to-face, or “brick-and-mortars,” a metaphor describing district public schools. At the time, I was unaware that the relationship to state policy and testing mandates is the key factor in determining curriculum, a matter only this research would reveal.

## **The Rhetoric of Crisis and Reform Begins to Articulate Itself**

The public school and cyber school experience, through two different charters, would provide one of the final pieces of evidence in the construction of a recurring theme which I began to understand through the presence of several common components. These factors comprised a body of rhetoric that seemed to promote the centralization of school administrative and pedagogical decision-making at the state level. There was a clear pattern evolving that suggested other influences of social, political, and economic forces that I discerned through conversations with administrators and teachers and my first hand observations of on-line classes in which my children were enrolled.

I also began to pay very close attention to educational practices and materials. Textbooks, from the brick-and-mortar school of our district to cyber schools, were all written in this fragmented, forward-leaping plan of presentation. The reality of the pragmatic-scientific methodology came to light when I understood that the curriculum was controlled by and designed according to state mandated standardized testing requirements. The first cyber school in which we enrolled used many textbooks and Pennsylvania System of School Assessment (PSSA) test preparatory workbooks as part of the weekly lesson plan and, upon examination, I realized the publishers of all of these materials were the same.

I found the same pattern of random sampling of subject matter I observed before, but this time, I was able to witness some additional methods I had not seen, beginning with the one-minute fluency reading tests described in previous chapters. Both children were given the fluency test several times, with the goal of making them read faster each time the test was administered. Over and over, they were made to read the same passage

as the teacher held a stop-watch and timed, recording even the most minute pauses, mistakes or mispronunciations. I saw both of my children move into a mode of anxiety and utter frustration between this and other tests administered in other subjects areas. My children were being taught to master processes so that they could to identify them quickly and reproduce the desired results in their performance on the standard exams.

In speaking to administrators, I challenged the lack of meaning in the lessons, the randomized sampling of subject matter, the monotonous repetition in process teaching and the excessive testing orientation in the overall environment. Although their accounts are in the third person, hearsay, essentially, I heard administrators and teachers speak of the lack of control they had in making curriculum decisions because, as public schools, they were being forced to provide proof that they should exist. They divert money directly from school districts who are all fighting to see them disbanded, leaving them in a fierce battle for their very existence. One of my son's teachers begged me to write to my congressman to fight for cyber schools who want to provide a different educational experience but because of the state standards, their obligation must be to ensure the children can pass the tests. There is a great deal relying on them in terms of funding, grade level, and advanced course placement. I knew this was important information for me to consider in my research, but I also understood that what they were telling me is that they had no influence over the quality of education.

My children were learning nothing and growing more disenchanted with the idea of school. As an educator, this was a horrible problem that I could not allow. I ultimately decided the only recourse was to homeschool. However, the search for curriculum yielded similar results; most plans tailor to the state minimum requirements. So, I

resorted to designing my own traditional approach based upon a whole rhetorical education that is holistic, sequential, and experiential. We also joined a group of likeminded parents and began our journey toward a whole education together, a project that is ongoing.

### **The Other End of the Learning Continuum: The Remedial College Class**

#### **The Template Goes to College**

The problems I had already identified in the curriculum my children were following I quickly recognized to be at the core of the issues college students presented in my classroom. Most had serious deficiencies in grammar, reading, writing and comprehension, particularly students in the remedial English courses I taught. In speaking to mathematics instructors, I learned that more remedial courses are being added each term, and the problems were all centered on foundational skills and discipline identification.

Many of my students, a large portion of whom were identified as advanced placement in high school, were incapable of following simple directions and were terrified by the suggestion that they deliberate upon the problem, think creatively, and employ imagination in completing an assignment. Upon giving an assignment, I always spent time going over the directions and outlining the requirements, after which time I opened the floor to questions of interpretation, but they were never that evolved. The first time students said, “Just tell us what to do,” I did not immediately recognize what this question meant, but after a student asked me whether there was a template, it sparked my memory, and I realized that template teaching was the only thing they understood. It was not their fault; they were simply unprepared to take on what I was asking of them because

they had not been given the exposure to critical thinking, creativity, and imaginative inquiry.

In the “remedial” (Attewell, et al. 886) English courses I taught, grammar was always a problem. It was not uncommon for students to have difficulty distinguishing a noun from a verb or an article from a noun or determining what part of the sentence adjectives modify. In these classes, our goals were simple: begin by writing one good sentence. By the end of the semester, construct a paragraph comprising five sentences. This might sound preposterously simple, but some students were successful and others, unfortunately, were not. As dramatic as these examples might sound, there were much worse problems.

I was shocked to find that many students simply could not read because they had no understand of the phonetic structure of words. I literally found myself assisting students in the pronunciation of simple words, several times per sentence. I, in fact, stopped having students read aloud because I found it too uncomfortable for them in a public forum, and I did not want to destroy what confidence they might have remaining by placing them under duress. The problems were so severe that nearly every student was a candidate for tutoring, but most declined the support.

### **The Stigma of the Label “Remedial “**

The stigma associated with the term “remedial” originates with the primary and secondary “special” course classification for students with disabilities, a response I heard on a number of occasions. Aside from the stigma, there are a number of other difficulties that arise for both students and the instructor in these cases, beginning with overburdened writing centers that have a hard time taking even those students who do want the help.

Most students faced with a full-time course schedule find it hard to coordinate additional time for tutoring between classes and activities, which is a very important aspect of college life that most do not want to sacrifice. The students in my classes expressed all of these concerns but my sense was that they really felt no sense of hope that they could possibly turn the situation around and therefore believed that tutoring would only delay the inevitable.

Some researchers suggest that in some cases students have been left so far behind all throughout their formal education that they stand little chance of every catching up (McBeth 77), but I have worked with students who have been given this sentence early in their primary school years, and the moment they know someone else believes they can and will succeed, they often can find the stamina and courage to change their situation. Unfortunately, many of my students and those of colleagues chose to walk away despite our best efforts, which is a devastating situation to watch and experience. Some were already mentally deflated by the label “remedial” placed upon them, particularly when they believed their high school AP course would be enough to move them into advanced standing.

### **Responsibility and Reality in University Interventions**

What options are there for students who cannot handle basic entry-level activities that are the foundation of all later studies? I found that these problems spanned the experiential base of all of my lower-level courses and, to a great extent, my upper level classes. As a scholar and a teacher, it was difficult to watch students struggle not just with the material but with the realization that they simply did not possess the knowledge they should, and I empathized with the sense of humiliation they felt. Most came to class

religiously, determined to change their lives, but it was not unheard of for students with the most severe deficiencies just to give up out of exhaustion and frustration as they internalized the magnitude of what was before them beyond my class. I, along with my colleagues, did my best to provide all of my students with a base of knowledge that would enable them to be successful not only in my class but later in advanced level courses. In reality, providing for all of the needs remedial and other struggling students present is a difficult challenge that many institutions of higher learning simply cannot meet because once a student goes to college, there are significant challenges they face in receiving the degree of support they require. Not every college or university is structurally or contextually oriented to provide remedial instruction (McBeth 76), and those that do often have to resort to the same measures, such as test-taking to assess abilities. Remedial instruction requires staff, an enormous time commitment, and the development of strategies that will provide support and encouragement. Realistically, the schools in which I provided remedial instruction made serious investments in these students, but it is not always possible, even with the best of interventions, to overcome the deficits. Some universities ultimately just cannot meet this challenge and find expulsion to be the only course of action (Bettinger and Long 736).

Research shows these challenges and the associated intellectual trauma my students felt are not uncommon. While there are not set standards between one university and another as to what constitutes “college-level” (Attewell, et al. 887) work, a “nationally representative cohort of students” (Attewell, et al. 888) identified by the National Educational Longitudinal Study (NELS), through transcript work, does suggest there are definite levels of remediation with associated effects, ranging

from a failure to graduate, an increase in the amount of time spent in pursuit of a degree, as well as other emotional factors. NELS findings suggest many students simply fail to graduate, exhibiting rates as low as thirty-nine percent among remedial students compared to a sixty-nine percent graduation rate among non-remedial students. Indications are that “poor high school preparation” (Attewell et al. , 889) and a “lack of rigor” in K-12 education (Bettinger and Long 737) are directly responsible for remediation and do, in many instances, lead to non-completion.

While the information derived from studies can be difficult to decipher where researchers assess skill levels or engage in comparisons of preparedness in key areas, they do provide a general sense as to how many students move onto college and of those, how many are placed in remedial courses. Researchers also examine just how many universities offer remedial courses, particularly in mathematics and English, but again, there are disparities in the statistics. According to one such study, the U. S. Department of Education estimates that remedial classes are offered in 75% of postsecondary institutions, which suggests that 28% of incoming freshman at both two and four-year schools are incapable of managing college-level academic demands (Howell 292). Many factors have been attributed to findings that suggest students lack the ability to handle coursework, including a loss of, identify as a result of being distanced from their supportive network of family, peers and educators (Howell 292-293). Ironically, the process of identification, which places students in the category of remedial can itself serve as a isolating element, particularly in atmosphere of the environment of the academic community which can intimidate students into further alienation (McBeth 77).



## **The Special Needs of a Remedial Class**

I began to recognize my role as a potential oppressor. I came to see that students in general perceive their own ability largely through the eyes of those who are given the responsibility to teach them. My awareness that the emotional state of my remedial students in particular was unique and it grew out of their dependence upon feedback and encouragement from me because they lacked any confidence in their ability to learn. This was an experience I had already encountered with my children. At this point, I already understood that their status as remedial was not simply a function of mechanistic pedagogical practices but a public school system that is structured to accommodate one learning style, employing the same methodology with everyone, which leaves those who cannot keep up left in the dark. Every student must think, behave, and perform according to the standards

The danger is that children who emerge from this system are often deeply impacted by the embarrassment of not understanding the material, but not because they are incapable of learning, which I found to be quite untrue; they simply needed interventions that matched their abilities and the delicate mental space they occupied on an emotional level. I knew I had to conceive of a way that I could infuse in them a belief in their own potential despite the real place of hardship from which they were starting. At the same time, I realized it would be important to provide them a realistic overview of some of the expectations of college life through sound information and preparatory practices, which I began to employ in many of my other classes.

## **Teaching Sound Academic Habits**

### **How to Study**

In all of my classes, even those not deemed remedial, students were lacking in basic and critical thinking skills in key areas that I believed were foundational to all learning endeavors. Aside from this problem, I had observed a bizarre phenomenon: none of my students in any of my classes were taking notes. I deduced that they simply did not know how, but they clearly required more than a class designed to master note-taking. Having said this, the strategies I employed in teaching remedial students was much more in depth and progressive than the methods I used in advanced level courses. However, generally, my approach involved an introduction to good study habits that would aid my students in reading, writing, and comprehension.

The first week of remedial and advanced composition classes started with skills such as how to read and outline a book, beginning with the introductory matter, reading through the table of contents, index, and headings throughout to teach students the value and importance of introducing themselves to the material from various perspectives. I encouraged them to engage physically with their texts and articles through a discussion of reading techniques, such as making the appropriate markings and notations. We also discussed how to approach note-taking, taking notes, building an index of vocabulary, and outlining theories mentioned in class. I later began to assign points to their notebooks and encouraged students to participate actively in class by referring to an idea or discussion from previous weeks in applying the material in later weeks.

We discussed proper research techniques, such as how to evaluate sources for credibility and what sources are considered acceptable for use in a college paper or speech, and we actually covered the use of reference materials such as the dictionary, thesaurus, citation guides, and other such materials. Where possible, I employed the services of a reference librarian in providing presentations on the use of both print and electronic media. Once students came to understand the rigors of the academic world, their view of their own capabilities were put into context.

### **Ancient Rhetorical Theory for the McDonald's Generation**

#### **Advanced Composition Course Methodology**

In my advanced Rhetoric and Composition course, I placed ancient rhetorical theory in conversation with popular culture in creating a hermeneutical space for the introduction of key skills in thinking, interpretation, and the evaluation of various texts, written and living. Several publications proved invaluable in creating in the mind of my students an historicity between ideas, situations, and problems that drive everyday life today with those of ancient Greece: Barry Brummett's *Rhetoric in Popular Culture*, Neil Postman's *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*, as well as several of Plato's works, including *Gorgias*, Aristotle's *Rhetoric I and II*, Gorgias's "*The Encomium of Helen*," and Isocrates's *Against the Sophists*.

I began with a contemporary perspective on rhetoric, which I believed would immediately situate our study within the framework of daily reality. This was a decidedly less threatening entry to the scholarly application of ancient rhetorical theory in examining issues confronting modern society for students of the social

media generation. Using a contemporary scholarly approach to rhetoric, Brummett offers an introduction to Plato's definitional approach to the construction of knowledge and the understanding that evolves through knowing the divisions and classifications at the core of meaning structures, while also explaining how overarching themes such as worldview and our ideas about culture and personhood influence how we interpret the world. This approach invited students into a conversation that challenged them to place their assumptions aside and delve into the complex meaning of things through an exposure to the dialectic. As both a skill and confidence builder, starting with a contemporary study of rhetoric through popular culture allowed students to achieve mastery of a discussion about familiar subjects before moving onto ancient Greek scholarship.

We then moved to an ancient rhetorical perspective, by again moving to a definitional approach, constructing a view of how the ancients perceived and defined rhetoric and what they believed about its proper usage. Students examined the modes of persuasion and its role in perpetuating or influencing our beliefs, and our ways of seeing and interpreting the world. They began to apply ethos, logos, and pathos to understand how emotions, evidence and credibility can be located in advertisements, video and texts in forming the ability to offer critical analysis of the world around them.

### **Intellectual Virtue in Reverse: A Critical Thinking Lesson in Rhetorical Persuasion**

Initially students were threatened by these discussions, and the entire time we discussed ancient rhetorical theory as the basis of all education and communication,

they simply could not understand the links. I heard many questions asking how the stories of dead guys had anything to do with their world. But I pressed on, believing that these lessons would provide a foundation for interpreting, critically examining, and understanding as the basis for knowledge, an exercise in building intellectual virtue in reverse. We proceeded by applying this new skill to an analysis of fast food restaurants.

### **Pathos Analysis**

I began by asking them if they believed they are the masters of their own thoughts or whether they believed themselves capable of being persuaded. Every student, without hesitation, proclaimed absolute independence of thought and actions, and some actually responded according to what I assessed to be a cultural orientation toward defensiveness in response to a challenge to reality. One student could barely speak, as she told me very clearly that she thought it was really “messed up” that I would insult them by suggesting that they are subject to manipulation, which was a rather astute interpretation of the exercise. I told her that her pathos oriented response was expected and okay, but just for the time being to place it aside and open up to the possibilities our discussion would create. I, in fact, invited all of the students to entertain their pathos oriented responses openly as the bias through which we would engage the following exercise.

One of the issues I understood, from my experience, to be descriptive of the student experience stemmed from the template teaching model that discourages creativity, imagination, and deliberation. I wanted to assist them in learning to step back away from pure opinion to recognize the complex nature of all things while

enabling them to develop the ability to employ reason as part of the deliberative process to which Aristotle refers in making judgments, a key critical thinking skill I noted to be absent in the experience of these students. Gadamer said of judgment in his interpretation of “judicium” (30), a term originating from eighteenth century German Enlightenment, that it is a basic “intellectual virtue” (30) considered to be both a higher and lower power of the mind. The sensible individual must learn to judge the uniqueness of all things, both in terms of the perfections and imperfections, and this kind of skill is an “internal coherence” (31) that Gadamer says; Kant referred to as a “reflective judgment” (31).

This exercise had to interject within the students’ minds an appropriate degree of dissonance so that they could learn to put their own assumptions on notice. Once we reached that point, I asked: What is your idea of the perfect burger? There were a number of responses, but McDonald’s was the clear winner by far, with Wendy’s and Burger King lagging just behind. For the sake of discussion, we chose McDonald’s, which had received the most votes. Once we were clear on who makes the best burger, I moved to ask them why they believe McDonalds to be the frontrunner. Not one of them thought it correct for me to ask them why they “believe” it is the best; it simply was the best. So, I prompted them with another question: “What is so special about a McDonalds burger?” Responses again ranged, but no one could really distinguish anything particularly different about the chain’s product from any others.

From this point, I began to question them about how they formed their expectations as to what makes a perfect burger; whether they had actually tried burgers from other chains or mom and pop shops, such as cafes; and I also asked

how burgers they or their parents make at home compared. We learned that most students had developed such a resistance to the notion that any other burger might come close to McDonalds that they made a habit of only ever buying theirs. If forced to go to a competitor, most students insisted that they would choose another menu option rather than eat something they considered to be subpar. I then openly announced that we would now set our pathos responses aside, having acknowledged them fully, and would move toward in developing a logos, evidence based investigation into their beliefs and the persuasive origin of these ideas in rhetorical devices McDonald's employs in helping them form these opinions.

### **Logos Analysis**

We then moved to define what quality and control means in the context of producing an ideal burger, while also identifying our favorite home cooked meal for which our mothers, fathers, or grandparents are famous. The class moved through a discussion that examined how the burgers are produced, identifying the mass, division of labor nature of the production process, i. e. , burgers are made according to specifications that mandate the size, shape, placement and even the color of every component on the sandwich - even the packaging. Students determined that their best evidence of a good burger stemmed from the expectation that every time they visited a McDonald's chain, whether it be in their own town, in the next state, or in Canada, they would receive a burger that looked, smelled and tasted the same in every location. I then asked that they place this aside.

The lesson moved to our a favorite dish or meal for which a family member is famous, looking to describe why we believe the dish is the best, why it is special to

us, and why we don't like the way anyone else makes that particular dish or meal. Most responses centered on comfort foods and inevitably, students described a secret family recipe that their mother or father refused to share with anyone else in the world. What they liked the most was that their mother, father, or grandparent made this dish unlike anyone else, and this unique quality is part of what makes the dish special. It was at this point when the breakthrough began to happen. Students began to put the story together themselves.

### **Ethos Analysis**

Moving onto ethos, students began to examine where their notion of an ideal burger originated, as we discussed the claims made about the product through commercials, advertisements, and jingles associated with the McDonalds brand. Students determined that they really had no particular reason to believe these advertisements because they were not capable of providing information that would support a largely subjective opinion. McDonald's claimed their burgers are the best and they do so because they can; they do not have to provide and, in fact, cannot provide evidence that supports their assertion or even admit their burgers are not the best if such evidence did exist.

What took place next was nothing short of a phenomenon. Having solved this puzzle, students began to express that they felt manipulated by product ads that suggest to them what they should think. They also felt a bit embarrassed that they had not given this greater thought, while feeling a new sense of empowerment over their ability to wade through this complex subject for themselves. They had, indeed, come to these conclusions. I simply employed the method of questing through the



dialectic in moving them through the exercise. During the next class, several students reported that they had given this lecture to their parents or friends, which is, again, a small demonstration of the power that lay in a rhetorical education. The mastery over their own knowledge gave students a sense of independence and ignited a passion and excitement for learning that propelled us through many such exercises where they showed remarkable insight and sophistication in analyzing various texts through a variety of media channels.

### **Final Thoughts and Implications**

Not only have I applied these methods to my college students, but my own children have gained mastery of English, mathematics, and science through the methodological guidelines for a whole rhetorical education as implied in the theories of Plato and Aristotle. I do believe, as a parent and an educator, that knowledge is the key to liberation as my own experience supports in personal and professional practice. My children and many of my college students, all of whom were rejected and failed by the industrialized public school system, proved highly capable of handling advanced level instruction as a result of these methods. Ultimately, the purpose of education should be to provide the kind of knowledge that will students to follow a learning continuum that will lead them from a primary to secondary and beyond to post-secondary education, in preparation for changing demands they will meet over the course of an adult life. As this research suggests, it is the belief of this researcher that only through a whole rhetorical approach to education and a return to knowledge as a lifelong pursuit can this goal be achieved.

A number of implications arise from this research. As Chapter One states, education in the United States is an institution that serves a critical role in forwarding the overall economic growth, domestic stability and international development of the country (Button and Provenzo 155) yet the transition from high school to college remains a concern. A growing number of students emerge from secondary education with an inability to move on to higher education or enter college with serious disparities in knowledge. This research has reviewed this problem from a historical perspective to explain how the education crisis came to be (Grant-Davie 264) while also establishing the appropriateness of re-conceptualizing the problem of education as a rhetorical situation rather than through crisis language.

### **Redefining the Education Crisis as a Rhetorical Situation**

Discourse about the problem of education has remained fixed in crisis-centered language, which has limited action to immediate patchwork approaches that ultimately add new layers of accountability and assessment under the premise that greater oversight and proof will heighten performance according to standardized production ideals. Therefore, the conversation must first move away from crisis centered discourse and engage the problem of education as a rhetorical situation. Through this approach the exigence of the problem can be recognized without placing barriers that limit what kinds of questions can be asked or limit how solutions are constructed. Specifically, the origin of the contemporary crisis and reform discourse must be examined in order to evaluate the degree of influence the industrial educational paradigm holds in contemporary educational practice, which will point to whether the application

of the methodologies of that are truly representative of the conditions confronting society today.

Bitzer asserts that rhetorical discourse indicates that a rhetorical situation is present. It is not the presence of the discourse alone, however, but the situation that calls discourse into action, and discourse about the event does follow, a criterion met in the presence of the rhetoric of crisis and reform (Bitzer 1-2). Although rhetorical situations often present with a history of issues, it is not a requirement but certainly is descriptive of the contemporary problem of education. This research has documented a long communicative path in which the presence of social problems, followed by discourse among rhetors<sup>4</sup>, including business leaders and political and social groups, called for a response.

The discourse that was brought into action was a campaign of rhetorical persuasion, which proposed that an industrial education might redirect the country toward “national efficiency” (Taylor 5) by redefining education as a “material resource” (Taylor 5-6), a commodity for the advancement and preservation of American society. The persuasive power of this narrative was given significance by the existence of real social problems of the moment but they also gave way to the opportunity for a new reality to be shaped according to the agenda of the most influential members of the community. However, many questions about how the industrial model and mechanistic pedagogy would impact the future of education remained open for contemporary society to answer (Bitzer 5-6).

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<sup>4</sup> Bitzer states that a rhetor is anyone who alters reality by “bringing into existence a discourse of such a character that the audience” (4); or public becomes so engaged in thought and action by the discourse that it actually serves as a mediator in bringing about change. Previous chapters have defined these rhetors to be business leaders, presidents and social groups.

## **Examination and Articulation of the K-12 versus College Learning Continuum**

Next, in order to understand the impact of the crisis and reform narrative as a direct influence on what students are taught and why and by what means learning is measured, the learning continuums of each the K-12 and system of higher education must be compared and contrasted to evaluate the aims to which each aspires and the methods by which those goals are achieved. The focus on benchmarking and testing appears to have little relationship to college preparatory requirements, and the concentration on performance on the part of teachers and students does not consider legislation, the system from an administrative and policy perspective, or curriculum.

Questions about the system must change. What is the role of knowledge in constructing an education that attends to both practical and intellectual considerations? What is the purpose of the K-12 system and is there truly a college preparatory focus? What is being taught in terms of the relationship between subject matter and disciplines? What are the disciplines and how should disciplinary stories be incorporated into the learning experience? What is the relationship between subject matter and disciplines from the perspective of higher learning and why? What are academic performance standards designed to measure and what are the learning outcomes sought as a result of these interventions? Who participates, in terms of professional association, experience, and expertise, in the design of these outcomes and measures? These questions impact not only primary and secondary schools but, because of the assessment and accountability environment, the university community, as well, which is under increasing scrutiny as social and political groups shift responsibility for the growing remedial class of students to the shoulders of colleges and universities.

Institutions of higher learning have remained committed to providing learning opportunities to struggling students by expanding support programs and offering developmental courses despite the fact that this is not a core competency of the academy. Both K-12 systems and colleges would benefit if learning expectations, including a body of prerequisites were clearly articulated, a measure that will directly impact the system of assessments and accountability at the legislative, administrative, pedagogical, and curricular levels. The need for prerequisites also suggests that a lifelong learning continuum might further establish higher education as the start of an adult education, to strongly reaffirm what universities expect from incoming students while also providing a framework of the college experience. Of course, these suggestions raise further questions for the academy. What is the role of the university in forwarding the conversation about prerequisites, a learning continuum, subject matter and disciplinary relationships, and assessments and accountability measures? Should universities further define their core competencies? And, in what ways is the application of standards harmful to the autonomy so essential to the manner in which universities function?

### **Social, Political and Economic Influences**

Perhaps the greatest challenge in constructing a body of solutions of long-standing consequence resides in the fact that as a public good, social, political, and cultural groups assume their perspectives and goals should be represented in any conversation about what education ought to do and by what means it should achieve those goals. The persuasive power of social groups directly influences legislation, which pressures schools to conform due simply to the financial support structure by

which schools are funded. However, as Plato implied, when the good is dictated by desires, establishing balance between intellectual and economic aims may be impossible to achieve.

### **Beyond the Scope: The Researcher, Students and the Drive Toward**

#### **Performance**

There are other implications that this work could not address, which point to the relationship between academic performance and the diagnosis of Attention Deficit Disorder (ADD) and Attention Deficity Hyperactivity Disorder (ADHD) (Breggin 4-5), particularly as a means by which schools exert “behavioral and social control of normal boys” (Breggan 147), who comprise 80% of the subjects receiving control substances. School administrators hold a great degree of power in coercing parents, or attempting to coerce parents such as this researcher, to diagnose their sons with ADD or ADHD and subsequently administer drugs (Breggin 25).

Dr. Peter Breggin first authored *Talking back to Ritalin*, in 1998, which was a critical publication used to raise public awareness about the increased use of dangerous, life-threatening stimulants, such as Ritalin and Adderall (xv) to control the behavior of children. As a result of his work, the National Institute of Health (NIH) appointed him as a scientific researcher and presenter on the adverse effects of psychiatric drugs on children, with side effects that include, heart failure (24), and the killing of brain cells (14). Breggin also inspired Dick Scruggs to initiate a class action lawsuit against Novartis, the manufacturer of Ritalin, CHADD, a parent group that promotes drug use for pharmaceuticals and the American Psychiatric Association, which receives financial benefits from the drug industry (xiv). Breggin

documents the drugging of small children, and the predominant use of these drugs on boys which is essentially designed to “suppress the spirit of the child” (14), a matter with which this researcher is all too aware.

My husband and I were strong-armed by our school district, which went to extraordinary lengths to convince us that our son was suffering with one of these disorders because he “could not learn.” We had the experience of having a principal openly assert this claim in a meeting of peers, and were confronted quite aggressively by a panel of school psychologists, teachers, and administrators in asserting these claims. Not only is this same child now excelling in advanced mathematics and physics courses in our homeschool plan, much of which is comprised of independent study and outside instruction with participating colleges such as St. Vincent’s, but writing a novel of his own initiative, all without drugs or other extraordinary interventions. He is self-motivated and focused and never has to be pushed to study or complete assignments. Further, he has not required great interventions on my part; no tutoring or any other such assistance.

The major difference between my methods and those employed in the curriculum I have adopted and that of the public school system my children left behind, is that my son and daughter are given the opportunity to think through complex problems, employ creativity, ask questions, and they are encouraged to take their time in learning new ideas. They learn in sequence, from a storied perspective, while allowing them to advance according to their own abilities and interests. The disparities between my experience with my children in their learning, with my son in particular, and the accounts of past teachers and administrators who claimed that he

was “smart” but could not learn absent one-on-one attention have been completely disproven.

Dr. Breggan’s research, which I had read early on in the process of transitioning away from public school, led me to conduct my own examination of the ADD and ADHD diagnostic process and the results of those early inquiries were now more strongly supported by my own investigation. After speaking to three different psychologists and psychiatrists, I learned that ADD and ADHD are the only mental health disorders that rely almost 75% upon the participation of teachers and school administrators in the process of diagnosis. Out of curiosity, I obtained the same packet schools receive which requires teacher, principals and school administrators all to answer questions and offer open feedback that is highly subjective in nature. Generous opportunity is given these individuals, to make unfounded and unproven assertions that I came to believe to be a method by which students are brought into alignment with the teaching methods required to perform in a standardized, highly pressurized environment. Although this research could not address this question, in the experience of this researcher, the performance and productivity agenda extends far deeper in term of the personal life of a child.

I also saw the impact of this diagnosis on the lives of my college students. Prior to administering any exam or assignment, I am obligated to notify students of their right to receive support services for disabilities and I always provided students who chose to participate in these programs with the highest degree of confidentiality and flexibility. However, many of my students quietly came to me and reported having received a diagnosis of ADD or ADHD early on but refused these



interventions once they moved on to higher education. I did not, at the time, fully understand the impact the stamp of “remedial” had placed on the face of these students, most of which are highly intelligent, who did not want to live with this label. As was my duty, I strongly encouraged students to take advantage of the services they had available to them but for many, this rejection of all they had been in their previous K-12 life was something about which they felt passionately. They understood on an intuitive level what Freire argued; they knew their true vocation was humanization and once they had the power to decide, many chose freedom.

As a result of my experience and my research, I believe that the performance and production system that is the model of most public schools creates several problems. Not only is the system structured to limit the comprehensive study of subject matter and because of the pressurized environment of assessments and accountability, the public school environment cannot accommodate different learning styles. Further, the performance objective has moved learning far away from knowledge as its center in favor of practices that focus on what processes are most useful and practical in meeting arbitrary goals of achievement. Fundamentally, it is a system that has lost its way, but hope is on the horizon if there is true rhetorical engagement of this problem from the many perspectives that are raised within this research as well as those beyond its scope.

## Works Cited

- Abadiano, Helen R. and Jesse Turner. "Reading Fluency: The Road to Developing Efficient and Effective Readers." The NERA Journal. 41. 1 (2005): 50-56. PDF file. 17 May 2012.
- Anonymous. "The First Iron Works in the Colonies." Bulletin of the Business Historical Society. 1. 8 (1927):7-12. *JSTOR*. Web. 08. Mar. 2011.
- Aristotle. *The Nichomachean Ethics*. Translated by, Harris Rackham. Hertfordshire: Wordsworth, 1996.
- . *Rhetoric & Poetics*. Translated by, W. R. Roberts and Ingram Bywater. New York: McGraw-Hill, Inc. 1984.
- Asen, Robert. "Introduction: Rhetoric and Public Policy." Rhetoric & Public Affairs. 13. 1 (2010): 1-6. *ProQuest*. Web. 23 Mar. 2012.
- Ashworth, Peter, and Kay Greasley. "The Phenomenology of 'Approach to Studying': The Idiographic Turn." Studies in Higher Education. 34. 5 (2009): 561-576. *ProQuest*. Web. 17 May 2010.
- Attewell, Paul, and David Lavin, and Thurston Domina, and Tania Levey. "New Evidence on College Remediation." The Journal of Higher Education. 77. 5(886-924). *JSTOR*. Web. 31 Jan. 2011.
- Bagley, William C. *Classroom Management: Principles and Techniques*. London: The MacMillan Co. , 1908. Google eBook. Web. 2 Feb 2012.
- . *Craftsmanship in Teaching*. New York: MacMillan Co. , 1911. Google eBook. Web. 2 Feb 2012.

- . *The Educative Process*. New York: MacMillan Co. , 1905. Google eBook. Web. 2 Feb 2012.
- Baigrie, Brian A. and J. N. Hattiangadi. "On Consensus and Stability in Science." The British Journal for Philosophy of Science. 43. 4 (1992) 435-458. *JSTOR*. Web. 3 Feb. 2012.
- Balduf, Megan. "Underachievement Among College Students." Journal of Advanced Academics. 20. 2 (2009): 274-294. *JSTOR*. Web. 2 Feb 2011.
- Bass, Randy, and Sherry L. Linkon. "On the Evidence of Theory: Close Reading as a Disciplinary Model for Writing About Teaching and Learning." Arts and Humanities in Higher Education. 7 (2008): 245-261. *SAGE*. Web. 30 Mar. 2012.
- Berger Jr. , Harry. "Facing Sophists: Socrates' Charismatic Bondage in Protagoras." Representations. 5 (1984): 66-91. *JSTOR*. Web. 15 Feb. 2011.
- Berlo, David K. *The Process of Communication*. New York: Holt, Rinehart and Winston, 1960. Print.
- Berryman-Fink, Cynthia. "Communication Instruction in a Lifelong Learning Program." Communication Education. 31 (1982): 349-355. *JSTOR*. Web. 7 December 2011.
- Bettinger, Eric P. , and Bridget Terry Long. "Addressing the Needs of Underprepared Students in Higher Education." The Journal of Human Resources. 44. 3 (2009): 737-771. *SAGE*. Web. 9 Mar 2012.
- Bineham, Jeffery L. "Displacing Descartes: Philosophical Hermeneutics and Rhetorical Studies." Philosophy & Rhetoric. 27. 4 (1994): 300-312. *JSTOR*. Web. 21 June 2011.

- Bishop, John H. "The Effect of National Standards and Curriculum-Based Exams on Achievement." The American Economic Review. 87. 2 (1997): 260-264. *JSTOR*. Web. 7 Jan. 2011.
- Bitzer, Lloyd F. "The Rhetorical Situation." Philosophy and Rhetoric. 1 (1968): 1-14. [http://www.arts.uwaterloo.ca/~raha/309CWeb/Bitzer\(1968\).pdf](http://www.arts.uwaterloo.ca/~raha/309CWeb/Bitzer(1968).pdf). *JSTOR*. Web. 3 Mar. 2011.
- Blake, Nigel. "Between Postmodernish and Anti-Modernism: The Predicament of Educational Studies." British Journal of Educational Studies. 44. 1 (1996): 42-65. *JSTOR*. Web. 20 April 2011.
- Borman, Geoffrey, Gina M. Hewes, Laura T. Overman and Shelly Brown. "Comprehensive School Reform and Achievement: A Meta-Analysis." Review of Educational Research. 73. 2 (2003): 125-230. *JSTOR*. Web. 16 Feb 2011.
- Brookfield, Stephen. "Overcoming Alienation as the Practice of Adult Education: The Contribution of Enrich Fromm to a Critical Theory of Adult Learning and Education." Adult Education Quarterly. 52. 2(2002): 96-111. *ProQuest*. Web. 5 Feb. 2011
- . "Repositioning Ideology Critique in a Critical Theory of Adult Learning." Adult Education Quarterly 52. 1(2001): 7-22. *ProQuest*. Web. 5 Feb. 2011.
- Brubacher, John S. *A History of the Problems of Education*. New York: McGraw- Hill, 1966. Print.
- . *Bases for Policy in Higher Education*. New York: McGraw-Hill, 1965. Print.
- . *On the Philosophy of Higher Education*. San Francisco: Jossey-Boss, Inc. , 1977. Print.

- Brubacher, John S. , and Willis Rudy. *Higher Education in Transition: An American History: 1636 – 1956*. New York, 1958. Print.
- Brummett, Barry. *Rhetoric in Popular Culture*. 2<sup>nd</sup> ed. Thousand Oaks: Sage Publications. 2006. Print.
- Bryant, Christopher G. A. , "Kuhn, Paradigms and Sociology. " *The British Journal of Sociology*. 26. 3 (1975): 354-359. *JSTOR*. Web. 16 Jan. 2012.
- Button, H. W. , and Eugene F. Provenzo. *History of Education and Culture in America*. Englewood Cliffs: Prentice-Hall, Inc. , 1983. Print.
- Butts, Freeman R. *Public Education in the United States: From Revolution to Reform*. New York: Holt, Rinehart and Winston, 1978. Print.
- Campbell, Robert, and Barry N. Siegel. “The Demand for Higher Education in the United States, 1919 – 1964. ” *The American Economic Review*. 57. 3 (1967): 482-494. *JSTOR*. Web. 27 Dec. 2010.
- Callahan, Raymond E. *Education and the Cult of Efficiency: A Study of the Social Forces That Have Shaped the Administration of the Public Schools*. Chicago: The University of Chicago Press, 1962. Print.
- Campbell, James. “One Hundred Years of Pragmatism. ” *Transactions of the Charles S. Pierce Society*. 43. 1 (2007). *JSTOR*. Web. 27 May. 2011.
- Chatterji, Madhabi. “Models and Methods for Examining Standards-Based Refors and Accountability Initiatives: Have the Tools of Inquiry Answered Pressing Questions on Improving Schools?” *Review of Educational Research*. 72. 3 (2002):345-386. *JSTOR*. Web. 11 Feb. 2011.

- Christ, Theodore J. and Scott P. Ardoin. "Curriculum-based Measurement of Oral Reading Passage Equivalence and Probe-set Development." Journal of School Psychology. 41 (2009): 55-75. *EBSCO Host*. Web. 7 Oct. 2011.
- Chroust, Anton-Hermann. "Plato's Academy: The First Organized School of Political Science in Antiquity." The Review of Politics. 29. 1 (1967): 25-40. *JSTOR*. Web. 28 Feb. 2011.
- Contu, Alessia, and Hugh Willmott. "Re-Embedding Situatedness: The Importance of Power Relations in Learning Theory." Organizational Science. 14. 3 (2003): 283-296. *JSTOR*. Web. 13 Aug. 2010.
- Cooper, Neil. "Plato's Last Theory of Knowledge." Apeiron: A Journal for Ancient Philosophy and Science. 28. 2 (1995): 75-89. *JSTOR*. Web. 9 June 2011.
- Cohen, Herman. *The History of Speech Communication: The Emergence of a Discipline, 1914-1915*. Washington D. C. : NCA 1994. Print.
- Crosswhite, James. *The Rhetoric of Reason: Writing and the Attractions of Argument*. Madison: University of Wisconsin, 1996. Print.
- Cunningham, Phyllis M. "United States of America." International Review of Education. 42. 1 (1996): 167-186. *JSTOR*. Web. 11 Feb. 2011.
- Dahlin, Bo. "Enriching the Theoretical Horizons of Phenomenography, Variation Theory and Learning Studies." Scandinavian Journal of Educational Research. 51. 4. (2007): 327-346. *ProQuest*. Web. 2 Feb. 2010.
- Davenport, Joseph and Judith A. Davenport. "A Chronology and Analysis of the Andragogy Debate." Adult Education Quarterly. 35. 3 (1985): 152-159. *EBSCO Host*. Web. 30 Jan. 2010.

- Deeds, Donald A. , and Charles S. Allen and Bruce W. Callen and Mark D. Wood. “A New Paradigm in Integrated Math and Science Courses. ” *Journal of College Science Teaching.* ” 30. 3 (2000): 178-183. *ProQuest.* Web. 25 Mar. 2012.
- Deeney, Theresa A. “One-Minute Fluency Measures: Mixed Messages in Assessment and Instruction. ” *The Reading Teacher.* 63. 6 (2010): 440-450. *JSTOR.* Web. 18 Aug. 2011.
- DeGroot, Gerald J. “Sputnik 1957. ” *American History.* 42. 5 (2007): 34- 39. *ProQuest.* Web. 22 Feb. 2011.
- Dehart, Paula and Perry Cook. “Transforming Middle Schools through Integrated Curriculum. ” *Voices From the Middle.* 4. 2 ((1997): 2-6. *ProQuest.* Web. 27 Mar. 2012.
- Demos, Raphael. “Plato’s Idea of the Good. ” *The Philosophical Review.* 46. 3 (1937): 245 – 275. *JSTOR.* Web. 28 Feb. 2011.
- Dewey, John. *Experience & Education.* New York: Simon & Schuster Inc. Print.
- Diggins, John P. “Ideology and Pragmatism: Philosophy or Passion?” *The American Political Science Review.* 64. 3 (1970): 899-906. *JSTOR.* Web. 11 Mar. 2012.
- Diggins, John Patrick. *The Promise of Pragmatism.* Chicago: University of Chicago Press, 1991. Print.
- Feng, Annie, et al. “A Longitudinal Assessment of Gifted Students’ Learning Using the Integrated Curriculum Model (ICM): Impacts and Perceptions of the William and Mary Language Arts and Science Curriculum. ” *Roeper Review.* *ProQuest Education.* Web 27 Mar. 2012.

- Field, John. "Educational Studies Beyond School." British Journal of Educational Studies. 50. 1 (2002): 120-143. *JSTOR*. Web. 12 Dec. 2011.
- Fisher Walter R. *Human Communication as Narration: Toward a Philosophy of Reason, Value, and Action*. Columbia: University of South Carolina Press. 1989. Print.
- Flint, William R. , William McCarter and Thomas Bonniwel. "Interdisciplinary Education in Sustainability: Links in Secondary and Higher Education." International Journal of Sustainability in Higher Education. 1. 2 (2000): 191-200. *EMERALD*. Web. 27 Feb. 2012.
- Flynn, Thomas R. and Dalia Judovitz. *Dialectic and Narrative*. Albany: State University of New York Press, 1993. Print.
- Franklin, Allan. "Are Paradigms Incommensurable?" The British Journal for the Philosophy of Science. 35. 1 (1984): 57-60. *JSTOR*. Web. 16 Jan. 2012.
- Fuller, Bruce, Joseph Wright, Kathryn Gesicki, and Erin Kang. "Gauging Growth: How to Judge No Child Left Behind?" Educational Researcher. 36. 5 (2007): 268-278. *JSTOR*. Web. 31 Jan. 2011.
- Gadamer, Hans-Georg. *Truth and Method*. 2<sup>nd</sup> rev. ed. Trans. Joel Weinsheimer and Donald G. Marshall, Continuum: New York, 2003. Print.
- Gagarin, Michael. "Did the Sophists Aim to Persuade?" Rhetorica: A Journal of the History of Rhetoric. 19. 3 (2001): 275-291. *JSTOR*. Web. 28 Feb. 2011.
- Gallagher, Shelagh A. "Myth 19: Is Advanced Placement an Adequate Program for Gifted Students." The Gifted Child Quarterly. 53. 4 (2009): 286-288. *ProQuest*. Web. 9 Mar. 2012.



- Garand, James C. "Integration and Fragmentation in Political Science: Exploring Patterns of Scholarly Communication in a Divided Discipline." The Journal of Politics. 67. 4 (2005): 979-1005. *JSTOR*. Web. 12 Dec. 2011.
- Garber, Daniel. "Descartes and the Scientific Revolution: Some Kuhnian Reflections." Perspectives on Science 9. 4 (2001): 405-422.
- Gibson, Walker. "In Praise of the Sophists." College English. 55. 3 (1993): 284-290. *JSTOR*. Web. 15 Feb. 2011.
- Geiger, Brian F. "Teaching About History and Science through Archeaeology Service Learning." The Social Studies. 95. 4 (2004): 166-171. *EMERALD*. Web. 27 Feb 2012.
- Glaser, Robert, and Edward Silver. "Assessment, Testing, and Instruction: Retrospect and Prospect." Review of Research in Education. 20 (1994) 393-419. *JSTOR*. Web. 21 Feb. 2011.
- Gollobin, Ira. "Dialectics and Wisdom" Science & Society. 62. 3 (1998): 483-496. *JSTOR*. Web. 9 May 2011.
- Graham, Patricia A. *Schooling America: How the Public Schools Meet Changing Needs*. Oxford: Oxford University Press, 2005. Print.
- Grant-Davie, Keith. "Rhetorical Situations and their Constituents." Rhetoric Review. 15. 2 (1997): 264-279. *JSTOR*. Web. 30 Mar. 2011.
- Greasley, Kay and Peter Ashworth. "The Phenomenology of 'Approach to Studying': The University Student's Studies Within the Lifeworld." British Educational Research Journal. 33. 6 (2007): 819-843. *ProQuest*. Web. 05 Mar. 2010.

- Guisbond, Lisa and Monty Neill. "Failing Our Children: No Child Left Behind Undermines Quality and Equity in Education. " The Clearing House. 78. 1 (2004): 12-15. *JSTOR*. Web. 31 Jan. 2011.
- Hagen-Burke, Shanna and Mack D. Burke, and Clay Crowder. "The Convergent Validity of the Dynamic Indicators of Basic Early Literacy Skills and the Test of Word Reading Efficiency for the Beginning of First Grade. " Assessment for Effective Intervention. 31. 4 (2006): 1-15. *EBSCO Host*. Web. 7 Oct. 2011.
- Hase, Stewart, Boon Hou Tay and E Goh. "Developing Learner Capability Through Action Research: From Pedagogy to Heutagogy in the Workplace. " Proceedings of Global VET: Challenges at the Global, National and Local Levels: Australian Vocational Education and Training Research Association (AVETRA) Conference. *ProQuest*. Web. 15 April 2010.
- Hase, Stewart and Chris Kenyon. "Heutagogy: A Child of Complexity Theory. " Complicity: An International Journal of Complexity and Education. 4. 1 (2007): 111-118. *ProQuest*. Web. 30 Jan. 2010.
- Hawhee, Debra. "Bodily Pedagogies: Rhetoric, Athletics, and the Sophists' Three Rs. " College English. 65. 2 (2002): 142-162. *JSTOR*. Web. 15 Feb. 2011.
- Hawk, David B. "Specialization in American Higher Education and the 'General Education' Movement. " Journal of American Sociology. 28. 1 (1954): 19-24. *JSTOR*. Web. 06 Jan. 2011.
- Haycock, Kati. "Building Common College-Ready Standards. " Change. 42. 4 (2010): 14-20. *ProQuest*. Web. 10 Mar. 2011.

- Helterbran, Valeri R. "Lifelong or School-Long Learning: A Daily Choice. " The Clearing House. 78. 6 (2005): 261-263. *JSTOR*. Web. 18 Aug. 2011.
- Hillygus, D. S. "The Missing Link: Exploring the Relationship Between Higher Education and Political Engagement. " Political Behavior. 27. 1 (2005): 25-47. *JSTOR*. Web. 17 Dec. 2010.
- Houser, Marian L. "Understanding Instructional Communication Needs of Nontraditional Students. " Communication Teacher. 18. 3 (2004): 78-81. *EBSCO Host*. Web. 4 Nov 2010.
- Howell, Jessica. "What Influences Students' Need for Remediation in College? Evidence from California. " The Journal of Higher Education. 82. 3 (2011): 292-318. *SAGE*. Web. 9 Mar. 2012.
- Husserl, Edmund. *The Crisis of European Sciences and Transcendental Phenomenology*. Ed. John Wild and James M. Edie. Evanston: Northwestern University Press. 1970. Print.
- Hutchings, Pat and Mary Taylor Huber. "Placing Theory in the Scholarship of Teaching and Learning. " Arts and Humanities in Higher Education. 7 (2008): 229-244. *SAGE*. Web. 30 Mar. 2012.
- Istance, David. "Schooling and Lifelong learning: Insights from OECD Analysis. " European Journal of Education. 38. 1 (2003): 85-98. *JSTOR*. Web. 19. Aug. 2011.
- Jarratt, Susan C. "The First Sophists and the Uses of History. " Rhetoric Review. 6. 1(1987): 67-78. *JSTOR*. Web. 15 Feb. 2011.

- Jernegan, Marcus W. "Compulsory Education in the American Colonies: I. New England." The School Review. 27. 1 (1919): 24-43. *JSTOR*. Web. 08 Mar. 2011.
- Johnson, Steve. "Skills, Socrates and the Sophists: Learning from History." British Journal of Educational Studies. 46. 2 (1998): 201-213. *JSTOR*. Web. 15 Feb. 2011.
- Jorgenson, Dale W. and Khuong Vu. "Information Technology and the World Economy." Scandinavian Journal of Economics. 107. 4 (2005): 631-650. *JSTOR*. Web. 21 Feb. 2011.
- Johansen, Morgen S. and Mark R. Joslyn. "Political Persuasion During Times of Crisis: The Effects of Education and News Media on Citizens' Factual Information About Iraq." Journalism & Mass Communication Quarterly. 85. 3 (2008): 591-608. *ProQuest*. Web. 23 Mar. 2012.
- Kasworm, Carol E. "Adult Higher Education from an International Perspective." Higher Education. 25. 4 (1993): 411-423. *JSTOR*. Web 05. Feb. 2011.
- Keysar, Boaz, and Sam Glucksberg. "Metaphor and Communication." Poetics Today. 13. 4 (1992): 633-658. *JSTOR*. Web. 8 Jan 2012.
- Kekes, John. "Wisdom." American Philosophical Quarterly. 20. 3 (1983): 277-286. *JSTOR*. Web. 9 May 2011.
- Kerferd, G. B. "Plato's Noble Art of Sophistry." The Classical Quarterly. 4. 1/2 (1954): 84-90. *JSTOR*. Web. 28 Feb. 2011.
- Kirby, John T. "Aristotle on Metaphor." The American Journal of Philology. 118. 4 (1997): 517-554. *JSTOR*. Web. 8 Jan. 2012.

- Koermer, Chas and John Petelle. "Scientific Management in Higher Education: Concerns and Using Collaborative School Management to Improve Communication." JACA Bulletin. 1 (1996): 25-39. *Gumberg Library*. Digital. 23 Feb. 2011.
- Koopman, Colin. "Language is a Form of Experience: Reconciling Classical Pragmatism and Neopragmatism." Transactions of the Charles S. Peirce Society. 43. 4 (2007): 694-727. 27 May, 2011.
- Kuhn, Thomas S. The Structure of Scientific Revolutions. 3<sup>rd</sup> ed. Chicago: University of Chicago, 1996. Print.
- Knowles, Malcolm. "Applying Principles of Adult Learning in Conference Presentations." Adult Learning. 4/1 (1992): 11-14. *Gumberg Library*. Digital. Web. 17 May 2010.
- . Andragogy in Action. San Francisco: Jossey-Bass, 1984. Print.
- . "How Do You Get People to Become Self-Directed Learners?" Training and Development Journal. 34. 5 (1980): 96 – 99. *ProQuest*. Web. 17 May 2010.
- Koermer, Chas and John Petelle. "Scientific Management in Higher Education: Concerns and Using Collaborative Management to Improve Communication." ACA Bulletin. 1 (1996): 25-39. *Gumberg Library*. Digital. 23 Feb. 2011.
- Kraus, Joe W. "The Development of a Curriculum in the Early American Colleges." History of Education Quarterly. 1. 2 (1961): 64 – 76. *JSTOR*. Web. 30 Dec. 2010.
- Lasswell, Harold D. "From Fragmentation to Configuration." Policy Sciences. 2. 4 (1971): 439-446. *JSTOR*. Web. 12 Dec. 2011.

- Leydesdorff, Loet. "‘Meaning’ as a Sociological Concept: A review of the Modeling, Mapping and Simulation of the Communication of Knowledge and Meaning." *Social Science Information*. 50. 3-4 (2011): 391-413. *SAGE Premier*. Web. 18 Oct. 2011.
- Lieb-Brilhart, Barbara. "Lifelong Learning: A Challenge for Communication Education." *Communication Education*. 27 (1978): 142-145. *JSTOR*. Web. 7 Dec. 1978).
- Little, Catherine A. and Annie X. Feng and Joyce Van Tassel-Baska and Karen B. Rogers and Linda D. Avery. "A Study of Curricular Effectiveness in Social Studies." *The Gifted Child Quarterly*. 51. 3 (2007):272-284. *ProQuest*. Web. 27 Mar. 2012.
- Loeb, Jane W. *Academic Standards in Higher Education*. New York: College Entrance Examination Board, 1992. Print.
- MacKenzie, Ian. "Pragmatism, Rhetoric and History." *Poetics Today*. 16. 2 (1995): 283-299. *JSTOR*. Web. 27 May 2011. Print.
- Madaus, George F. "Test Scores as Administrative Mechanisms in Educational Policy." *The Phi Delta Kappan*. 66. 9 (1985): 611-617. *JSTOR*. Web. 21 Feb. 2011.
- Mailloux, Steven. *Disciplinary Identities*. New York: Modern Language Association, 2006. Print.
- Marton, Ference, and Wing Y. Pang. "On the Unit of Description in Phenomenography." *Higher Education Research & Development*. 24. 4 (2005): 335-348. *ProQuest*. Web. 12 Mar. 2010.

- McBeth, Mark. "Arrested Development: Revising Remediation at John Jay College of Criminal Justice." Journal of Basic Writing. 25. 2 (2006): 76-93. *SAGE*. Web. 9 Mar 2012.
- McLendon, Michael K. , James C. Hearn, Russ Deaton. "Called to Account: Analyzing the Origins and Spread of State Performance Accountability Policies for Higher Education." Educational Evaluation and Policy Analysis. 28. 1(2006): 1-24. *JSTOR*. Web. 17 Feb. 2011.
- McLuskie, E. D. "The Embeddedness of Communication in the Slime of History: Themes Leading to the Thesis of a Communication Crisis." Journal of Communication Inquiry. 7. 3 (1981): 3-31. *ProQuest*. Web. 1 Feb 2012.
- Merriam, Sharan B. "Androgagy and Self-Directed Learning: Pillars of Adult Learning Theory." New Directions for Adult and Continuing Education. 89 (2001): 3- 13. *ProQuest*. Web. 17 May 2010.
- Meyer, John W. and David Tyack. "Public Education as Nation-Building in America: Enrollments and Bureaucratization in the American States, 1870-1930." *AJS*. 85. 3 (1979): 591-612. *JSTOR*. Web. 30 Dec. 2010.
- Mezirow, Jack. "A Critical Theory of Adult Learning and Application." Adult Education. 32. 1 (1981): 3-24. *Proquest*. Web. 24 Aug. 2010.
- . "Transformative Learning: Theory to Practice." New Directions for Adult and Continuing Education. 74(1997) *Proquest*. Web. 24 Aug. 2010 .
- Miall, David. "Metaphor as Thought Process." The Journal of Aesthetics and Art Criticism. 38. 1 (1979): 21-28. *JSTOR*. Web. 8 Jan. 2012.

- Moore, George W. and John R. Slate. "Who's Talking the Advanced Placement Courses and How Are They Doing: A Statewide Two-Year Study." The High School Journal. 92. 1 (2008): 56-67. *ProQuest*. Web. 9 Mar. 2012.
- Neilsen, Richard P. , and Ron Dufresne. "Can Ethical Organizational Character Be Stimulated and Enabled?: 'Upbuilding' Dialog as Crisis Management Method." Journal of Business Ethics. 57. 4 (2005): 311-326. *JSTOR*. Web. 16 Nov. 2011.
- Newman, John Henry. *The Idea of a University*. New Haven: Yale University Press, 1996. Print.
- O'Donnell, Victoria L. and Jane Tobbell. "The Transition of Adult Students to Higher Education: Legitimate Peripheral Participation in a Community of Practice." Adult Education Quarterly. 57. 4 (2007): 312-328. *ProQuest*. Web. 5 Aug. 2010.
- Paavola, Sami, Lasse Lipponen, and Kai Hakkarainen. "Models of Innovative Knowledge Communities and Three Metaphors of Learning." Review of Educational Research. 74. 4 (2004): 557-576. *JSTOR*. Web. 16 Feb. 2011.
- Pang, Ming F. "Two Faces of Variation: On Continuity in the Phenomenographic Movement." 47. 2 (2003) *ProQuest*. Web 03 Mar. 2010.
- Phillips, Derek L. "Paradigms and Incommensurability." Theory and Society. 2. 1 (1975): 37-61. *JSTOR*. Web. 16 Jan. 2012.
- Plato. *Phaedrus*. Translated by, Benjamin Jowett. *Google Books*. Web. Mar. 2012.
- . *Protagoras*. Translated by, Standley Lombardo and Karen Bell. Indianapolis: Hackett Publishing, Inc. , 1992. Print.



- Porter, Andrew C. "National Standards and School Improvement in the 1990's: Issues and Promise." American Journal of Education. 102. 4 (1994): 421-449. *JSTOR*. Web. 11 Feb. 2011.
- Power, Edward J. "Plato's Academy: A Halting Step Toward Higher Education." History of Education Quarterly. 4. 3 (1964): 155-166. *JSTOR*. Web. 28 Feb. 2011.
- Rachal, John R. "Androgogy's Detectives: A Critique of the Present and a Proposal for the Future." Adult Education Quarterly. 52. 3 (2002): 210-227. *ProQuest*. Web. 6 May 2010.
- Ranson, Stewart, Jane Martin, Jon Nixon and Penny McKeown. "Towards a Theory of Learning." British Journal of Educational Studies. 44. 1 (1996): 9-26. *JSTOR*. Web. 18 Aug. 2011.
- Raubitschek, A. E. "Plato's College." The Classical Weekly. 45. 13 (1952): 193-196. *JSTOR*. Web. 28 Feb. 2011.
- Ravitch, Diane. "History's Struggle to Survive in the Schools." Magazine of History. 21. 2 (2007): 28-32. *ProQuest*. Web. 22 Mar. 2012.
- Rayner, Stephen. "Researching Style: Epistemology, Paradigm Shifts and Research Interests Groups." Learning and Individual Differences. 21 (2011): 255-262. *SciVerse*. Web. 7 Oct. 2011.
- Resnick, Daniel P. "Testing in America: A Supportive Environment." The Phi Delta Kappan. 62. 9 (1981): 625-628. *JSTOR*. Web. 21 Feb 2011.
- Reynolds, Sherrie and Robert F. Lusch, and David Cross, and Nowell Donovan. "Higher Education Administration in a Dynamic System." Journal of Thought. Spring (2009): 91-120. *Sage Premier*. Web. 13 Feb. 2012.

- Rivkin, Steven G. , Eric A Hanushek, and John F. Kain. "Teachers, Schools, and Academic Achievement. " Econometrica. 73. 2 (2005): 417-458. *JSTOR*. Web. 16 Feb. 2011.
- Roberts, Charles W. "The Unprepared Student at the University of Illinois. " College Composition and Communication. 8. 2 (1957): 95-100. *JSTOR*. Web. 31 Jan. 2011.
- Rochberg-Halton, Eugene. "Why Pragmatism Now?" Sociological Theory. 5. 2(1987): 194-200. *JSTOR*. Web. 27 May 2011.
- Roderick, Melissa, Brian A. Jacob, Anthony s. Bryk. "The Impact of High-Stakes Testing in Chicago on Student Achievement in Promotional Gate Grades. " American Educational Research Association. 24. 4 (2002): 333-357. *JSTOR*. Web. 16 Feb. 2011.
- Rodriquez, Roberto. "Florida Report Shows College Students Underprepared in Reading, Writing, and Math: Remedial Programs Underway and Already Successful. " Black Issues in Higher Education. 11. 7 (1994): 32. *ProQuest*. Web. 11 Feb. 2011.
- Rogers, A. K. "Plato's Theory of Forms. " The Philosophical Review. 44. 6 (1935): 515-533. *JSTOR*. Web. 6 June 2011.
- . "Plato's Theory of Forms. " The Philosophical Review. 45. 1 (1936): 61-78. *JSTOR*. Web. 9 June 2011.
- Rose, Peter W. "Sophocles' Philoctetes and the Teachings of the Sophists" Harvard Studies in Classical Philology. 80 (1976): 49-105. *JSTOR*. Web. 15 Feb. 2011.

- Rosenthal, Sandra B. and Patrick L. Bourgeois "Pragmatism, Scientific Method: Return to Lived Experience. " Philosophy and Phenomenological Research. 38. 1 (1977): 56-65. *JSTOR*. Web. 26 May 2011.
- Roxa, Torgny, Thomas Olsson and Katarina Martensson. "Appropriate Use of Theory in the Scholarship of Teaching and Learning as a Strategy for Institutional Development. " Arts and Humanities. 7. 3 (2008):276-294. *SAGE*. Web. 30 Mar. 2012
- Runesson, Ulla. "What Is It Possible to Learn? On Variation as a Necessary Condition for Learning. " Scandinavian Journal of Educational Research. 50. 4 (2006): 397-410. *ProQuest*. Web. 11 Mar. 2010.
- Sandor, Andras. "Metaphor and Belief. " Journal of Anthropological Research. 42. 2 (1986): 101-122. *JSTOR*. Web. 8 Jan. 2012.
- Schiappa, Edward. "Sophistic Rhetoric: Oasis or Mirage?" Rhetoric Review. 10. 1 (1991): 5-18. *JSTOR*. Web. 28 Feb. 2011.
- Schuetze, Hans G. and Maria Slowey. "Participation and Exclusion: A Comparative Analysis of Non-Traditional and Lifelong Learners in Higher Education. " Higher Education. 44. 3/4 (2002): 309-327. *JSTOR*. Web. 18 Aug. 2011.
- Secor, Marie, and Davida Charney. *Constructing Rhetorical Education*. Carbondale: Southern Illinois University Press, 1992. Print.
- Seeger, Mathew W. , and Robert R. Ulmer. "Virtuous Responses to Organizational Crisis: Aaron Feuerstein and Milt Cole. " Journal of Business Ethics. 31. 4 (2001): 369-376. *JSTOR*. Web. 16 Nov. 2011.

- Sheehan, Richard D. J. "Metaphor as Hermeneutic. " Rhetoric Society Quarterly. 29. 2 (1999): 47-64. *JSTOR*. Web. 8 Jan. 2012.
- Sibley, Donald, Deb Biwer and Amy Hesch. "Establishing Curriculum-Based Measurement: Oral Reading Fluency Performance Standards to Predict Success on Local and State Tests of Reading Achievement. " Proceedings of the Annual Meeting of the National Association of School Psychologists. Washington: 2001. *Gumberg Library*. Digital. Web 08 Mar. 2011.
- Simon, Joan. "The History of Education in Past and Present. " Oxford Review of Education. 3. 1 (1977): 71-86. *JSTOR*. Web. 30 Dec. 2010.
- Simmons, Patricia E. , and Herb Brunkhorst, Vincent Lunetta, John Penick, Jodi Peterson, Barbara Pietrucha, and John Staver. "Developing a Research Agenda in Science Education. " Journal of Science Education and Technology. 14. 2 (2005): 239-252. *JSTOR*. Web. 16 Sept. 2011.
- Sorensen, Asger and Morten Raffnsøe-Møller and Arne Grøn. Dialectics, Self-consciousness and Recognition: The Hegelian Legacy. Malmö: NSU Press, 2009.
- Stabile, Donald R. "The Du Pont Experiments in Scientific Management: Efficiency and Safety, 1911-1919. " The Business History Review. 61. 3 (1987): 365-386. *JSTOR*. Web. 22 Mar 2012.
- Stanton, G. R. "Sophists and Philosophers: Problems of Classification. " The American Journal of Philology. 94. 4 (1973): 350-364. *JSTOR*. Web. 15 Feb. 2011.
- Stecker, Robert. "Pragmatism and Interpretation. " Poetics Today. 14. 1 (1993): 181-191. *JSTOR*. Web. 27 June 2011.

- Steeves, Peter H. "Phenomenology and the Possibility of Narrative." Clio. 24. 1 (1994): 21. *PROQuest*. Web. 29 Nov. 2011.
- Stevens, Robert J. "Integrated Reading and Language Arts Instruction." RMLE Online. 30. 3 (2006): 1-12. *ERIC*. Web. 23 Mar. 2012.
- Stevens, Robert J. and Robert E. Slavin. "The Cooperative Elementary School: Effects on Student's Achievement, Attitudes and Social Relations." American Educational Research Journal. 32. 2 (1995): 321-351. *JSTOR*. Web. 27 Mar. 2012.
- Strain, Michael. "Towards an Economy of Lifelong Learning: Reconceptualising Relations Between Learning and Life." British Journal of Educational Studies. 46. 3 (1998): 264-277. *JSTOR*. Web. 18 Aug. 2011.
- Taylor, Frederick W. The Principles of Scientific Management. Filiquarian Publishing LLC, 2007. N. pag. *Adobe Digital*. Web. 5 Jan 2012.
- Tomlinson, Stephen. "Edward Lee Thorndike and John Dewey on the Science of Education." Oxford Review of Education. 23. 3 (1997): 365-383. *JSTOR*. Web. 22 Mar. 2012.
- Trow, Martin. "American Higher Education: Past, Present, and Future." Educational Researcher. 17. 3 (1988): 13-23. *JSTOR*. Web. 30 Dec. 2010.
- Tuijnman, Albert and Ann-Kristin Bostrom. "Changing Notions of Lifelong Education and Lifelong Learning." International Review of Education. 48. 1/2 (2002): 93-110. *ProQuest*. Web. 18 Aug 2011.

- Ulmer, Robert R. , and Timothy L. Sellnow. "Consistent Questions of Ambiguity in Organizational Crisis Communication: Jack in the Box as a Case Study. " Journal of Business Ethics. 25. 2 (2000): 143-155. *JSTOR*. Web. 16 Nov. 2011.
- Valimaa, Jussi and David Hoffman. "Knowledge Society Discourse and Higher Education. " Higher Education. 56. 3 (2008): 265-285. *JSTOR*. Web. 14 Mar. 2012.
- Vanderstraeten, Raf, Gert Biesta. "How Is Education Possible? Pragmatism, Communication and the Social Organization of Education. " British Journal of Educational Studies. 54. 2 (2006): 160-174. *JSTOR*. Web. 27 May 2011.
- Wahlstrom, Ninni. "Learning to Communicate or Communicating to Learn? A Conceptual Discussion on Communication, Meaning, and Knowledge. " Journal of Curriculum Studies. 42. 4 (2010): 431-449. *ProQuest*. Web. 1 Nov. 2011.
- Walsh, James J. "Scholasticism in the Colonial Colleges. " *The New England Quarterly*. " 5. 3 (1932): 483 – 532. *JSTOR*. Web. 30 Dec. 2010.
- Walton, Douglas N. "Why is the Ad Populum A Fallacy?" Philosophy and Rhetoric. 13. 4 (1980): 284-278. *JSTOR*. Web. 6 Oct. 2011.
- Waters, Lindsay . "The Age of Incommensurability. " Boundary. 28. 2 (2001): 133-172. Web. *JSTOR*. 4 Nov. 2011.
- Weenie, Angelina. "Curricular Theorizing From the Periphery. " Curriculum Inquiry. 38. 5(2008): 545 – 557. *JSTOR*. Web 30 Dec. 2010.
- Welch, Kathleen E. *The Contemporary Reception of Classical Rhetoric: Appropriations of Ancient Discourse*. New Jersey: Lawrence Erlbaum Associates, 1990. Print.

- White, John. "Education, the Market and the Nature of Personal Well-Being." British Journal of Educational Studies. 50. 4 (2002): 4442-456. *JSTOR*. Web. 03 Mar. 2010.
- Wilcox, Stanley. "The Scope of Early Rhetoric Instruction." Harvard Studies in Classical Philology. 53 (1942): 121-155. *JSTOR*. Web. 15 Feb. 2011.
- Wilkinson, Doris. "Transforming the Social Order: The Role of the University in Social Change." Sociological Forum. 9. 3 (1994): 325-341. *JSTOR*. Web. 07 Jan. 2011.
- Willis Rudy. *Higher Education in Transition: A History of American Colleges and Universities, 1636 - 1976*. 3<sup>rd</sup>. , Ed. New York: Harper & Row Publishers 1976. Print.
- Yoshimoto, Keiichi, Yuki Inenaga and Hiroshi Yamada. "Pedagogy and Andragogy in Higher Education - A Comparison Between Germany, the UK, and Japan." European Journal of Education. 42. 1 (2007): 75-98. *JSTOR*. Web 5 Aug 2010.
- Zafft, Cynthia K. "Bridging the Great Divide: Approaches That Help Adults Navigate From Adult Education to College." Adult Learning. 9. 1-2 (2008): 6-11. *ERIC*. Web 14 Feb. 2011.
- Zald, Mayer N. "More Fragmentation? Unfinished Business in Linking the Social Sciences and the Humanities." Administrative Science Quarterly. 41. 4 (1996): 251-261. *JSTOR*. Web. 12 Dec. 2011.
- Zeidler, Dana L. , and Troy D. Sadler, and Michael L. Simmons, and Elaine V. Howes. "Beyond STS: A Research-Based Framework for Socioscientific Issues Education." Wiley InterScience. (2005): 357-377. ProQuest, Web. 2 Feb. 2012.

Zinser, Richard. "A Curriculum Model of a Foundation for Educating the Global Citizens of the Future." On the Horizon. 20. 1 (2012): 64-73. *EMERALD*. Web. 27 Feb. 2012.