

The Quest for a Unitary Curriculum

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Abstract

Contemporary educators are rediscovering the need for a more unitary curriculum, often without cognizance of the long struggle for curriculum synthesis as evidenced in the curriculum literature. In the face of increasing knowledge specialism and fragmentation and an increasingly multicultural society, the need for a more unitary curriculum as exemplified in the unit of work is examined.

The concept of democracy has received renewed recognition through worldwide events with the close of the twentieth century. This renaissance of democratic ideals and values on a global scale impelled American educators to give renewed attention to the function of public education in a democratic society.

Paradoxically, although the subject-centered curriculum continues to dominate in an era of national and statewide standardized achievement testing as the chief measure of school quality (Epstein 1996), renewed attention is being given to the contributions of John Dewey and other experimentalist-progressive educators who promoted the idea and practices for building a more unitary curriculum. Dewey saw very clearly that the form of the curriculum must follow its function. In effect, Dewey turned the concept of the curriculum “essentials” on its head when he declared,

The scheme of a curriculum must take account of the adaptation of studies to the needs of the existing community life;

it must select with the intention of improving the life we live in common so that the future shall be better than the past. Moreover, the curriculum must be planned with the reference to placing essentials first, and refinements second. The things that are socially most fundamental, that is, which have to do with the experiences in which the widest groups share, are the essentials. The things that represent the needs of specialized groups and technical pursuits are secondary. (1916, 191)

Contemporary educators are rediscovering the need for a more unitary (interdisciplinary) curriculum, often without cognizance of the long struggle for curriculum synthesis as evidenced in the curriculum literature. Unitary curriculum has a rich heritage in the integrated units of work practiced at the Dewey’s Laboratory School in Chicago and other progressive schools. Initially, the development of the unit-of-work involved the identification and formulation of realistic problems, themes, topics for study and devising the ways and means of investigation into a variety of relevant sources of data. This required articulation of the curriculum both vertically, through the grades, and horizontally, across the subject areas. The unit-of-work “orchestrated a carefully considered body of related activities of significance to the pupil and so planned as to develop insight, skill, understanding, and control of some important aspect of human experience” (Leonard 1955, 436). The integrated unit-of-work purported to connect the curriculum to the

nature of the learner and to the life of the learner in and for a free society. The unit-of-work emphasized student engagement in the actual application of knowledge through investigative activities involving projects that related to life experiences. In the face of increasing knowledge specialism and fragmentation, the need for a more unitary curriculum as exemplified in the unit-of-work is evident. In an increasingly multicultural society, the need for a more unified curriculum is increasingly paramount—a curriculum that takes full account of the nature of the learner in harmony with the democratic prospect. Contemporary educational leaders need to recognize the rich body of knowledge in the curriculum field.

Origins

The unit-of work as a curricular approach evolved during the experimentalist-progressive movement in the United States. Understanding the impetus for the progressive movement in education provides insight into the development of the unit-of-work curricular approach. According to Cremin (1964), the progressive movement in education began in the 1890's with Joseph Rice precisely because he saw it as a movement. Rice, a young New York pediatrician, fueled the movement with his monthly articles on American public school systems, published in 1892 in *The Forum*, a New York monthly. After touring 36 cities, visiting their public school systems and talking with 1,200 teachers, Rice publicized his dismal findings (Cremin 1964). The American schools were dimly lit, poorly heated, frequently unsanitary, and overcrowded. Public apathy, political interference, corruption, and teacher incompetence were prevalent in the schools. The students were subjected to endless drill, rote

repetition, and meaningless language exercises (Cremin 1964).

Yet, Rice's publications faced strong opposition. The national reports and policies issued by the National Education Association in the 1890's supported the subject-centered, traditional modes of education (Tanner and Tanner 1990). The progressive movement in education spearheaded by Rice emerged in the midst of strong opposition against the politically controlled, mechanical system of American public education. While Rice provided the "rallying cry" for the progressive movement in education, other visionaries during the last half of the 19th century developed new approaches to curriculum reform. The unit-of-work exemplified one of these new approaches to curriculum, which took shape in the newly established laboratory and demonstration schools, spearheaded by Kilpatrick and Dewey in Chicago during the early 1900's.

Today's progressive educational ideas represent an important renaissance of the progressive movement from the opening of the 20th century. Progressive educational ideas uniquely address educational issues in historical and modern day American democracy. The dominant practices from both time periods include discipline-centered curriculum that hinders American students by: emphasizing testing and measuring statistical data, developing curriculum without considering students' interests, and ignoring the need to foster a sense of democratic stewardship in young Americans (Eisner 1994). The resulting educational issues associated with American democracy include: increasing knowledge specialization that produces an overcrowded, fragmented curriculum in our schools, and an increasingly multicultural society. Arthur Schlesinger describes the problems associated with an increasingly multicultural

society in his book, *The Disuniting of America* (1992). As contemporary progressive educators rediscover the need for a more unitary curriculum, they address the current educational issues in American democracy: overcrowded, fragmented curriculum in our schools that lacks the unifying form needed in an increasingly multicultural society.

During the past few decades, contemporary progressive educators demonstrated a renewed interest in a form of curriculum called the *Integrated Unit of Work* (Beane 1991). Dewey, one of our nation's curriculum leaders, clearly saw that the form of curriculum must follow the function of a democratic society. The integrated unit-of-work developed at his Laboratory School in Chicago not only connects the curriculum to the nature of the learner, but connects to the life of the learner in and for a free society. This form of curriculum emphasizes student learning through hands-on investigative activities involving projects related to life experiences.

Dewey was just one of our nation's curriculum leaders that supported the integrated unit-of-work because it complements the curriculum paradigm that evolved throughout the 20th century. Dewey argued that curriculum development should include three fundamental factors that interdependently make up what he called the educative process: (1) the learner ("the immature, undeveloped being"); (2) society ("certain social aims, meanings, values incarnate with the matured experience of the adult"); and (3) organized subject matter ("the specialization and divisions of the curriculum") (Dewey 1902, 181-185). Simply put, the structure and function of the curriculum must be in harmony with the nature and needs of the learner and the life of the learner as a member of a free society (Tanner and Tanner 1995).

Dewey's fundamental factors in the educative process were formulated from the work in his Laboratory School at the University of Chicago. Dewey's fundamental factors or sources of curriculum development were further developed and refined by Inglis (1918), Rugg (1926), Bode (1927), Giles, McCutchen, and Zechiel (1942), Taba (1962), Tyler (1949) and Tanner and Tanner (1995). They were used to guide the program of curriculum development and evaluation by the staff in the Eight-Year Study (1932-1940) that will be discussed later. The paradigm can be utilized to evaluate approaches to curriculum development.

The paradigm calls into consideration the most profound philosophical, social, and psychological questions, such as: What knowledge is of most worth? How is this knowledge to be reconstructed as curriculum? How is it to become transformed as working power for the individual learner in the school and society? How is it to affect a significant bearing on societal improvements? (Tanner, L. 1982, 410).

The unit-of-work approach to curriculum development addresses Dewey's three fundamental factors in the educative process, namely: (1) the nature of the learner, (2) the values and aims of a democratic society and (3) the selection, organization and treatment of knowledge in that thing that is called the curriculum. Dewey's three fundamental factors in the education process, the learner, society, and the organized subject matter, act as both sources and influences upon the development of curriculum. Differences in how each of the three factors is conceived are linked to the priorities and biases of differing schools of educational psychology and philosophy.

Dewey supported cognitive-developmental psychology that garnered support from progressive educators throughout the 20th century. Dewey (1910), Piaget (1950), Havighurst (1972), and others recognized that the learners' mental growth is developmental and changes qualitatively and re-forms throughout the maturational process. The Tanners (1995) offered support to Dewey's, Piaget's, and Havighurst's developmental stages and their connection to curriculum development. They presented a three-dimensional schema showing the interdependence of the various cognitive, affective, and biosocial developmental processes (Tanner and Tanner 1995, 288).

Dewey opposed the traditional, rote memorization methods of that day based on the theory of mental-discipline. The theory of mental-discipline was built on faculty psychology, which held that the mind consisted of separate faculties, or powers, that were developed and improved by exercise (Tanner and Tanner 1990). The theory of mental-discipline ascribed to the belief that students' minds had innate mental capacities that needed to be exercised like a muscle or filled to capacity like vessels; thus students' innate intellect differed only in quantity and not quality. Teachers taught a body of facts from separate subjects to their students. With varying mental capabilities, the students memorized the facts and regurgitated them in recitation and examinations (Tanner & Tanner, 1990).

Dewey felt that if education was to advance knowledge and educational practices, it must utilize the scientific method of inquiry or problem method of investigation. The problem method of education is an evolving process rather than a fixed means of instruction (Dewey 1910). Dewey's problem-solving method elaborated on Ward's (1883) more general ideas about

curriculum development presented in *Dynamic Sociology* and made them functional (Tanner and Tanner 1995). Dewey identified the following essentials of reflection for the problem method:

They are first that the pupil have a genuine situation of experience—that there be a continuous activity in which he is interested for its own sake; secondly, that a genuine problem develop within this situation as a stimulus to thought; third, that he possess the information and make the observations needed to deal with it; fourth, that suggested solutions occur to him which he shall be responsible for developing in an orderly way; fifth, that he may have the opportunity and occasion to test his ideas by application, to make their meaning clear and to discover for himself their validity (Dewey 1916, 150; Dewey 1910, 72-78; Tanner and Tanner 1995, 169).

Dewey's problem method of investigation was utilized in the development of the units of work at his Chicago Laboratory School (Mayhew and Edwards 1936; Tanner, L. 1997).

Separate and Not Equal

By contrast disciplined-centered curriculum represented separate and isolated subjects with subject matter organized as "content" to be "recalled" by the learner for recitation and testing. It mitigated the curriculum paradigm (the fundamental factors in the education process): (1) the design and structure of the curriculum to meet the macrocurricular function of general education in a free society and (2) to meet the nature and needs of the learner (Dewey 1902; Giles, McCutchen, and Zecheil 1942; Tanner and Tanner 1995; Alirangues 2003). The curriculum paradigm has been useful in

establishing the criteria for evaluating the efficacy of educational reform proposals and in determining the causes of failure of various reform efforts

(Tanner and Tanner 1995; Presseisen 1985; Hlebowitsh 1987). In her study, *Unlearned Lessons*, Presseisen (1985) surmised that the majority of educational reforms failed because they violated the fundamental factors in the paradigm and ignored past findings in the curriculum field. This is also consistent with Peter Hlebowitsh's 1987 study that found many of the reforms failed because they ignored or neglected the nature of the learner and aligned the curriculum to narrow nationalistic purposes rather than the problems and prospects for a democratic society.

In fact, history is full of lessons that reveal the effects of curriculum that violates the curriculum paradigm. For example, the launching of Sputnik I in 1957 by the Soviets left the Americans racing to establish their superiority in the space race. The curriculum was turned to defeating the Soviets in the drive for global political and military dominance. The emerging discipline-centered curriculum heavily favored the sciences and mathematics over all other subjects. There was a redirection of guidance programs to talent search for gifted students in math and science; an emphasis on knowledge specialization, purity and abstraction by the university-scholar-specialists to the neglect of practical knowledge relating to the life of the learner in and for a democratic society. Vocational education, physical education, and the arts were devalued as a result of the narrow national curricular priorities. As a result, curriculum from the 1960s represented separate and isolated subjects with subject matter organized as "content" to be recalled by the learner for recitation and testing. During the

discipline-centered period of the 1960s, national reports and policies devalued unitary curriculum. It is this violation of the curriculum paradigm that caused student disengagement, as evidenced in the student protests and their call for curricular relevance (Engler 1973).

More recently, further evidence reveals that the dominant discipline-centered curriculum fails to meet the needs of our democratic society. In the 1992 *Sandi Report*, the minority and urban students in America continued to demonstrate low achievement. Similarly in 2007, although minority students in America have shown some improvement on certain math and reading achievement tests, there is still needed room for improvement (NCES 2007). Yet, in the face of historical evidence that reveals that the discipline-centered curriculum does not connect with or address the needs and interests of our minority students, this type of curriculum continues to dominate and weaken our American democracy.

Concurrently, in the 1990's, there was a call for accountability, a call for national assessment of students' progress. In 1991, President George H. W. Bush announced the issuance of *America 2000: An Educational Strategy*. It presented as a long-range plan to move every community in America toward the National Educational Goals adopted by the President and the Governors in 1990 (U. S. Department of Education, *America 2000: An Educational Strategy* 1991). *America 2000* called upon the National Educational Goals Panel to develop world-class standards for each of the five core subjects. After taking office, President Clinton endorsed all of the elements of *America 2000* with the exception of Bush's call for school vouchers. Under the rubric of *Goals 2000* (1992), President Clinton promoted a test-driven curriculum that would be assessed by "New World Class Standards" through American

Achievement Tests. President George W. Bush continued to advocate high national educational standards and test driven discipline-centered curricula as evidenced in his support of the *No Child Left Behind Act* in 2003.

This move for accountability of public schools has been spurred on by publications and press releases as well. The publication of the 1983 report of the National Commission on Excellence, *A Nation at Risk*, helped to generate the idea that the public schools were responsible for the fundamental erosions of quality of life in America (Hlebowitsh 1996). The negative and often inaccurate national media coverage of American public education has further contributed to the widespread lack of recognition of the attainment of American public schools (Hlebowitsh 1996).

As a result, in response to the call for accountability, the dominant discipline-centered curriculum has been aligned to the states' educational standards. These standards represent the curriculum priorities of an elite group and do not adequately address the needs of the disadvantaged. They devalue the arts and vocational education.

Compounding the problem, the discipline-centered curriculum that is aligned to state standards is measured by achievement tests. According to Madaus' research in 1988, as the chief measure of state standards, the standardized tests tend to measure math and reading skill acquisition rather than higher level thinking skills. Standardized tests have been modified in an attempt to address these issues. However, high stakes testing puts pressure on teachers to teach to the test to produce acceptable scores (Madaus and Kellaghan 1992; Epstein 1996) and narrows the curriculum and pedagogical practices. Consequently, in this high stakes testing environment, teachers' creativity and spontaneity

are hindered and devalued. Madaus states, "If important decisions are presumed to be related to test results, then teachers will teach to the test" (1988, 90). Further, continues Madaus,

Examples include tests directly linked to such important decisions as: (a) graduation, promotion, or placement of students; (b) the evaluation or rewarding of teachers or administrators; (c) the allocation of resources to schools or school districts; and (d) school or school system certification. (1988, 87)

Educators might well ask, "If the current standardized tests tend to measure math and reading skill acquisition rather than higher level thinking skills and teachers are pressured to teach to the test, then what do these tests really reveal?" Madaus and Haney offer this response: The goal of increasing student learning is supplanted by improving average tests scores, which has the effect of distorting and corrupting the educational process it is intended to monitor (Madaus 1988, 89; Haney and Madaus 1986, 14).

Community of Learners

Contemporary educators are rediscovering the need for a more unitary curriculum, in an ahistorical manner often without cognizance of the long struggle for curriculum synthesis as evidenced in the curriculum literature. Unitary curriculum has a rich heritage in the integrated units of work practiced at Dewey's Laboratory School in Chicago. Many schools like the Dewey School used the unit-of-work in curriculum development during the progressive era of education during the first half of the 20th century. This approach in its exemplary form characteristically grew to encompass: practical and generalized knowledge, horizontal and vertical articulation of curriculum, synthesis of

studies, reflective thinking for problem solving, instruction for individual differences, instruction through activities and projects, varied teaching resources, discovery learning, concrete educational experiences, field trips, varied forms of evaluation, spiral learning, teachers acting as guides, developmental learning, the recognition of students' interests and needs, and the concern for fostering of democratic citizens and the betterment of American democracy (Dewey and Dewey 1915; Lincoln School Staff 1927; Aikin 1942; Rugg and Shumaker 1969).

Historical research reveals the onset of planning a more unitary curriculum entailed the reorganization of school schedules in both the elementary grades, and the middle school and high school grades. Blocks of time were scheduled daily for elementary teachers and core teachers on the secondary level to work with students. When deemed necessary and appropriate, students developed and practiced their skills during designated periods (A Description of the Curricular Experiences at the University School for the School Year of 1938-1939; Sokoloff 2004). The unitary curriculum has been criticized for not providing time during the day for students to practice their basic skills (Baxter, 1929). However, teachers can schedule time for students to practice their skills as needed, and the teachers at the University School in Columbus, Ohio demonstrated just that. Skill acquisition was purposefully connected to projects, activities, and the problem method of instruction. Students applied their skills to real life experiences as opposed to contrived artificial exercises that lacked meaning for the students' lives.

Perhaps some examples will make this clear. At the University School the students applied and practiced their skills in age appropriate units of work such as: the first-grade

unit-of-work, *Toys* (1938-1939) that provided time for students to construct toys and puppets from around the world while learning how springs and weights worked in them; the fourth-grade unit-of-work, *How the People of China Are Like Us and How They Are Different From Us* (1948-1949) that allowed students time to study Chinese music and theatre and perform the play, "The Story of the Willow Plate"; the eight-grade unit-of-work, *Uncle Sam's Work* (1936-1937) that provided students time to compile a 67-page book that examined the United States government, welfare system, crime, national defense, immigration, conservation and food control, weather forecasting, money and coinage, highways and bridges and national parks; and the twelfth-grade unit-of-work, *Were We Guinea Pigs?* (1937-1938), an account of the students' school experiences through the course of the Eight-Year Study. Holt published the students' 303-page book that included photos, charts, graphics, and a bibliography. In all the aforementioned units of work, students' interdisciplinary skills were applied and practiced through meaningful and collaborative work (Sokoloff 2004).

Historical research reveals that the unit-of-work approach to curriculum was tested in the field during the Eight-Year Study (1933-1942). The Eight-Year Study conducted in the 1930's examined thirty schools that used experimental curriculum approaches, one being the unit-of-work. The study included nearly 3,000 students enrolled in 300 colleges to determine the effect of traditional academic subject admission requirements on the success of college students. Compared to their matches in traditional discipline-centered curriculum programs, the graduates of the 30 schools that utilized experimental curriculum such as the unit-of-work: earned higher grade point averages, received

more academic honors, demonstrated more precise, systematic, and objective problem solving skills, and exercised more intellectual curiosity. Because much of our society exists outside the classroom, it is also interesting to note that these students: became more actively concerned about what happened in society, earned more nonacademic honors, and proved more resourceful in meeting new situations (Aikin 1942; Tanner and Tanner 1990).

The popularity of the unit-of-work as a form of curriculum spread through the first half of the 20th century and acquired other names such as: the teaching unit, the core unit, the problem method, and the project method (Billet 1932). The term core curriculum was often used in conjunction with the unit-of-work during the progressive era. However, there was a difference between core curriculum and the unit-of-work. The unit-of-work was one example of an integrated approach to curriculum development. The unit-of-work, as mentioned intended as:

A complete experience based upon a meaningful situation in child or adult life. The unit-of-work was a fusion of mental, emotional, and sensory experience; it proceeded in a physical and social setting that resembled life in so far as possible; and it was directed toward the accomplishment of goals that resulted in some improvement of life. (Harap 1931, 2; Tanner and Tanner 1990)

By contrast, the core curriculum was far more inclusive in being conceived as common learnings or general education organized as an integrated curriculum related to common themes or problems as required study for all students. Core curriculum implied that the separate subjects would be articulated through various approaches to curriculum organization and articulation

through correlation (connections between separate courses such as U.S. history and American literature), broad fields (interrelated subjects such as civics, geography, history, and economics), fusion (combined courses such as U.S. history and American literature), and even interdisciplinary problems such as Problems of Democracy. Core teachers often correlated two subjects such as history and English or math and science. The problem-focused core curriculum was intended to make the curriculum relevant to the learner's life. It might replace all or part of the subject curriculum in general education with the purpose of engaging students from various backgrounds in working together toward solving problems of life in a democratic society (Tanner and Tanner 1995). A unit-of-work may be one of many units in a subject or broad field.

The term project method was often used simultaneously with the unit-of-work during the progressive era. However, there was a difference between the project method and the unit-of-work. Both projects and units were used in the Dewey School (Mayhew and Edwards 1936) before the turn of the century and in the Francis W. Parker School as early as 1901 (Tanner and Tanner 1990). However, it was Kilpatrick, a professor at Teachers College who systematized projects into a method in 1918. According to Kilpatrick, there was only one criteria for a project: "the presence of a dominating purpose" (1918, 321 and 324). It was the attitude of the learner toward his or her work that was important. For Kilpatrick, a project was a "wholehearted purposeful activity proceeding in a social environment" (1918, 320). In, *Foundations of Method*, Kilpatrick stated that it was preferable for children to have practice in all four steps of any given project: purposing, planning, executing, and judging. Yet, he stated that it was acceptable for the child to adopt the teacher's suggestion for a project as his or her

own (1941, 212). The project method was mainly a method. It did not necessarily link education with social problem solving and the progressive improvement of society, but neither did the unit-of-work. Although, the integrated unit-of-work as developed by the experimentalist-progressive educators, purported to connect the curriculum to the nature of the learner and the life of the learner in and for a free society (Alberty 1927; Tanner and Tanner 1990).

Varied definitions surfaced as well. The various definitions, types, and sources for the unit-of-work generated confusion and criticism within the field of education (Caswell and Campbell 1935; Taba 1962). This confusion and criticism from the past is reflected in the profession today. Yet, the legacy of the unit-of-work as a conceptual development to provide unitary teaching and learning through the thoughtful planning of a coherent curriculum endured. The distinctive characteristic of a unit-of-work was significant understanding of a central thematic body of knowledge engaging the learner in activities and projects as related to the life of the learner (Caswell and Campbell 1935; Harap 1931).

During the progressive era, teachers at the Lincoln School in NY such as Emily Barnes and Bess Young received tremendous guidance from the faculty at Teachers College. They developed many exemplary units of work for students and resource units for the teachers to use. Their unit-of-work entitled *Children and Architecture* took their sixth-grade students in to the real world to visit the Riverside Church to observe the details on the doorway of a modern Gothic Cathedral and its stained-glass windows. Later their students were afforded opportunities to make stained-glass windows and construct models of different kinds of bridges with the assistance of their industrial arts teacher. These projects required the use of

skills in geometry and measurement. The students extended their knowledge about stained-glass windows and learned about the history of rose windows. Greek and Roman legends were read that gave accounts about the building of famous churches and buildings. Poems were written by the students that related to the central theme of study: Architecture. The students wrote and published the play, "The Wonderful Doors." Much of the action in the play took place in front of a replica of the famous carved doors in Florence. Their students learned how to scale architectural drawings and make blueprints. They wrote and illustrated research reports that reflected their own interests in architecture. Barnes' and Young's unit-of-work *Children and Architecture* provided for varied forms of evaluation (pretests, posttests, quizzes, research reports, projects, and observations) that measured students' social, emotional, and cognitive progress, individual differences, stimulated their students to widen their interests, connected their students with the needs of society, offered their students opportunities to use a variety of academic skills, and created a classroom environment that promoted cooperative and collaborative learning for their students (Young and Barnes 1932).

Unfortunately, over the years the concept of the unit-of-work has become a veritable cliché for any topical organization of subject matter and is even used to designate sections in textbooks. This distortion neglected the nature and interests of the learners and violated the curriculum paradigm. In part, the distortion occurred because teachers often lacked the education, training, material resources, scheduling accommodations, and time required for planning, developing, and implementing unitary curriculum. Also, in part, the distortion occurred due to the influential, efficiency movement in education that was at its

height during the years 1910 to 1930. This systematic, linear approach to planning curriculum defines goals, identifies tasks, and organizes the tasks from simple to complex so that as the child proceeds along the way, progress toward the ultimate goal is assured (Morrison 1926). The most prevalent misinterpretation of the concept of the unit-of-work was the Morrison Plan.

The Morrison Plan was very mechanistic, linear, teacher directed and executed. Little room for digression was permissible and mastery of content was the end goal (Morrison 1926). The Morrison Plan eventually led to the present-day subject or discipline-centered units of work and was more closely aligned to the goals of the efficiency movement than the progressive movement of education. Many contemporary units of work followed Morrison's linear behavioristic strategies for learning and ignored the interests and needs of the learners and society. Thus, they violated the curriculum paradigm. In addition, the Morrison Plan allowed for units of subject matter to be called units of work as long as they included a wide variety of teaching strategies (Morrison, 1926). In effect, Morrison advocated that the unit-of-work would be based upon subject-matter encompassing a significant aspect of environment or culture. By contrast, the unit-of-work approach to curriculum development required teachers to guide students on a long personal educational journey that led to significant understanding of a central thematic body of knowledge engaging the learner in activities and projects as related to the life of the learner. The experiential unit-of-work, as conceived in the Dewey Laboratory School and the Lincoln School did seek to connect the pupil experiences with the democratic social prospect. The distortion of the original concept of the unit-of-work is still with us today, with textbooks

commonly organized as chapters into units, which merely represent groupings of chapters, and not integrated units of work. Yet, the legacies of unitary curriculum endured as evidenced by contemporary writings.

Form Follows Function

In 1991, Beane stated “knowledge and skill need to be taken out of abstract subject categories and repositioned in the context of thematic units where they are more likely to develop. In an era of rapid knowledge explosion, this kind of curriculum is both appropriate and realistic.” Thematic units are not a new idea. The unit-of-work, *Children and Architecture*, developed at the Lincoln School in NY utilized all the disciplines including the studio arts and industrial arts. In 1936, the *Building America* series developed originally by the Society of Curriculum sought to meet the need for relevant curriculum that addressed the interests and needs of the learners and our democratic society. Each volume was organized according to themes and problems of American social, political, economic, cultural or international life—such as health, crime, education, energy, war, taxes, housing, food, and civil liberties. The units of study treated America's contemporary problems frankly and objectively (Hanna, 1936-1938; Tanner, D., 1988). These exemplary thematic units can serve as paradigms for educators today. In 1984, Vars reminded us that the National Association for Core Curriculum published a bibliography of research on the effectiveness of block-time, core, and interdisciplinary team teaching. Historic research reminds us that public, private, and laboratory schools nationwide in the Eight-Year Study (1942) successfully utilized unitary teaching, team teaching, and school scheduling that supported unitary curriculum. Brunkhorst stated, “since so much of modern scientific

research occurs at the interface of science disciplines (geophysics, biochemistry, human ecology), science must now be taught in a way that makes connections among the sciences and with the real world of the student” (1991, 37). The exemplary unit-of-work, *Civics For Democracy*, (Isaac 1992) advocated real life experiences for students such as investigating and evaluating community waste disposal programs, including plans for future landfills or incinerators. Historical research reminds educators that real life community research projects were conducted at the Ohio State University School during the Eight-Year Study.

In 1994, Perkins and Blythe advocated the idea that “understanding” is being able to carry out a variety of “performances” that show one’s understanding of a topic and at the same time advance it. Current educators need to be reminded that unitary teaching at Dewey’s Laboratory School promoted active learning and performance based evaluation through projects and activities such as planting and caring for a garden and constructing and furnishing a clubhouse. In 1994, Perrone discussed engagement of students in learning. He stated “to draw students into the depth and complexity of a subject, we must look for topics that relate to students’ lives.” The Foxfire Books published by Wigginton from 1972-1993 cite numerous examples of students involved in real life projects relating to their Appalachian Mountain Community in north Georgia. The students wrote about their heritage in English class and in doing so, developed a deep appreciation for their ancestors. Writing across the curriculum unifies the curriculum and addresses the current educational problem of an overcrowded curriculum.

Gardner’s work on multiple intelligences in 1983 called for a more equitable curriculum

that meets the needs of all types of learners. During the Eight-Year Study, the Dalton School in New York City introduced the course, Nursery-Biology that did just that. It was met with a great deal of enthusiasm from the ninth-grade girls and proved to be very successful. The freshmen program was built around the work in the Dalton School Nursery. Human biology was taught in relation to the Nursery School that was placed in charge of the teacher of biology who had experience in children’s hospitals. The students spent one week in the nursery as a worker during each semester. They made out individual daily health charts, graphed the babies’ weights, heights, and temperatures, and recorded food intake and caloric value of their diets. The students’ evaluation was performance based. Unitary curriculum involves a wide variety of experiences and activities that address and evaluate various learning styles (PEA 1943). The exemplary unit-of-work *The Nature of Recreation* published in 1972 involved not only reading about recreational facilities in a community, but provided blueprints to design and construct a model community with a variety of recreational facilities. This unit-of-work offers a variety of activities and projects that address and evaluate various types of learners and learning styles for contemporary educators to use with their students.

In 1993, Wiggins stressed authentic evaluation that measures student growth. Nearly half a century earlier, the Ohio State University School (June 1945) used authentic evaluation that measured the students’ social, emotional as well as academic growth. Standardized tests were viewed as one piece of evidence to evaluate student progress and often were utilized for diagnostic purposes. For example, at the University School at Ohio State University, intelligence tests, reading readiness tests, reading achievement tests, math achievement tests, were

administered. In high school, aptitude tests and American Council Psychology assessments were administered. In addition, teacher-made evaluations of students' values, social acceptance, thinking skills, library skills, interests, and psychological profiles were compiled. Teachers in grades K through 12 at the University School compiled individual portfolios of students' work, teacher observations, and comments about students' progress. Evaluation was continuous, concerned with end products and the means to reach those ends and cooperative. All those who were affected by the evaluation participated in it—administrators, teachers, pupils and parents (Ohio State University school 1945).

In 1995, Tanner wrote about our social fragmentation and multicultural conflict in our schools. He states:

The great problems of our age involve social fragmentation and multicultural conflict. The challenge of the twentieth century for our school has been to build intercultural understandings through a unified core curriculum while simultaneously providing diversified studies for a cosmopolitan student population. This is an ever-greater challenge as society becomes increasingly multicultural (Tanner and Tanner 1995).

The same idea is reiterated in Schlesinger's, *The Disuniting of America*.

Instead of a transformative nation with an identity all its own, America increasingly sees itself in this new light as preservative of diverse alien identities. Instead of a nation composed of the individuals making their own unhampered choices, America increasingly sees itself as composed of groups more or less ineradicable in their

ethnic character. The multiethnic dogma abandons historic purposes, replacing assimilation by fragmentation, integration by separatism. It belittles 'unum' and glorifies 'pluribus.' (1992, 16-17)

Echoing Tanners' and Schlesinger's thoughts, Wraga (1995) wrote, "it's time to recover the unifying function of the comprehensive high school through a 'Common Learnings Course'." Interestingly, "Columbia University has established a national reputation for its core curriculum, a required series of classes that includes a yearlong contemporary civilization course. Students study Homer's epic *Odyssey*, the Bible, Plato's *Republic* and selections from Marx and Darwin. They feel the course provides them with a common cultural literacy (U.S. News and World Report, 2006, 52) Regardless of the educational grade level; this form of curriculum addresses our social fragmentation and multicultural conflict. Adding further support, Tanners' write interdisciplinary curriculum provides horizontal articulation and recognizes the reality that experience is integrated; the school should enable students to understand the complex interrelatedness of experiences (Wraga 2007, 92; Tanner and Tanner 2007, Chapter 10).

Current research has found that students in interdisciplinary school environments learn subject matter as well or even better than do students in subject-centered school environments (Vars 1996; Caskey 2006; Wraga 2009). Hoy makes the argument that students tend to learn better when they perceive a connection between their concerns and what they are asked to learn (Hoy and Hoy 2006, 150; Wraga 2009). This complements Tyler's earlier findings that interdisciplinary curriculum, both vertically and horizontally fosters the cumulative impact of all learning experiences for students through

unification of the subjects (Tyler 1949; Wraga 2009).

Various forms of curriculum used in the past acquire new names and parade as the latest educational fashion without being subjected to historical evaluation. This type of evaluation is an essential part of the curriculum development process for our school based curriculum committees. For example, historical research supports field trips that have historical roots in the work of Francis Parker (1837-1902) the superintendent of the public school system of Quincy, Massachusetts. Field trips then and now provide valuable real life experiences for students to learn from and write about. John Dewey referred to Parker as the father of progressive education (Cremin 1964). Parker encouraged teachers to introduce their own teaching materials into the classrooms. He emphasized: discovery learning, field trips, the whole language approach, the reading and writing connection, individual expression, conversations about experiences, drawing, and curriculum synthesis (Cremin 1964). The current research of preschool education reveals that preschool education helps to narrow the achievement gap between students from different socio-economic backgrounds (Hohmann and Weikart 2002). This research builds on the research from the High/Scope Perry Preschool Study initiated in 1962 (Schweinhart, Barnes, Weikart, Barnett, and Epstein 1993). Writing across the curriculum unifies the curriculum and addresses the current educational problem of an overcrowded curriculum. Again, it has historical roots in the work of Francis Parker (1837-1902). Community service projects offer students an opportunity to improve their own as well as other communities. This idea of fostering a better society was evident in Dewey's Laboratory School in Chicago and a key

characteristic of the unit-of-work approach to curriculum (Dewey 1916).

Our educational leaders need to embrace and build upon the history of the unit-of-work approach to curriculum. Too often, educators spend unnecessary time and effort reinventing the wheel. Evaluating past curriculum work helps educators to build upon the successful approaches and avoid repeating those that failed. Our students' learning experiences today are hindered because the dominate discipline-centered curriculum violates the curriculum paradigm by: emphasizing testing and measuring statistical data, developing curriculum without considering student's interests, and ignoring the need to foster a more unified curriculum in an increasingly multicultural society. As contemporary progressive educators rediscover the need for a more unitary curriculum, the current educational issues associated with American democracy are addressed. The need for a more unified curriculum is increasingly important—a curriculum that addresses the increasing knowledge specialism and fragmentation and takes full account of the nature of the learner in harmony with the democratic prospect. Dewey eloquently stated that the need for universal equity in education is essential to democracy:

What the best and wisest parent wants for his own child, that must the community want for all of its children. Any other ideal for our schools is narrow and unlovely; acted upon, it destroys our democracy. All that society has accomplished for itself is put, through the agency of the school, at the disposal of its future members. All its better thoughts of itself it hopes to realize through the new possibilities thus opened to its future self. Here individualism and socialism are at one.

Only by being true to the full growth of all the individuals who make it up can society by any chance be true to itself. (1900, 7)

Dewey saw very clearly that the form of the curriculum must follow its function (Dewey 1916).

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