



# education review // reseñas educativas

editors: gene v glass gustavo e. fischman melissa cast-brede

a multi-lingual journal of book reviews

July 18, 2011

Volume 14 Number 6

ISSN 1094-5296

The NDEA and American Education:  
Reflections on and Review of Wayne Urban's  
*More than Science and Sputnik*

O. L. Davis, Jr.  
The University of Texas at Austin

Urban, Wayne J. (2010) *More than Science and Sputnik*.  
Tuscaloosa, AL: University of Alabama Press.

Pp. 264 ISBN 978-0817316914

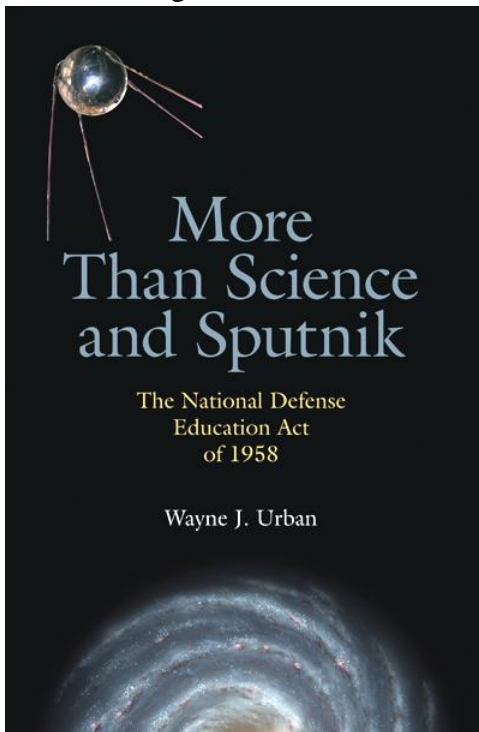
Citation: Davis, O. L. Jr. (2011 July 18) The NDEA and American Education: Reflections on and Review of Wayne Urban's *More than Science and Sputnik*. *Education Review*, 14(6). Retrieved [Date] from <http://www.edrev.info/essays/v14n6.pdf>

I like Wayne Urban's new book, *More than Science and Sputnik*. I read it with rising interest from cover to cover and, then, I reread it. This book portrays the all-but-forgotten piece of legislation that constituted a watershed event in the history of American education. As well, it drew me into my own autobiography.

After having read the book twice and portions of it several times, I have

wondered—and maybe Urban shares this curiosity—how many people, teachers and administrators and former teachers and school administrators, educational policy analysts and planners even remember the passage of the National Defense Education Act (NDEA) and have even a simple notion of its impact on and its importance to American education. I easily generate several trivia-type questions: What was the

context of American education at the time of NDEA's passage? When did the Soviet Union launch its first earth-orbiting satellite? What was the purpose of the NDEA legislation? Or, if it had multiple purposes, what two or three seem to have been most significant? These and similar



questions are warranted. However, at this point and at least for me, they are the substance of private conjecture and seminar discussions

My review of Wayne Urban's book is personal. My remarks are set within the international context of the late 1950s, specifically the disruption of American exceptionalism by the appearance of the Soviet Sputnik earth-orbiting satellite in 1957, and the subsequent vicious attacks on American public schools as the cause of this national embarrassment by the assumption of superbly-educated scientists in the USSR

and their remarkable achievement. I shall never forget, for example, Edward R. Murrow's visage as he announced with an apparent sneer on a CBS television network program that many boys at a highly reputable San Francisco high school were substituting for physics a course in "co-ed cooking." The purported cause of this outrage was the usual villain, "progressive education" and its errant spawn, "life-adjustment education." American schooling, in this view, was inane, unworthy of support, and in desperate, immediate need of fundamental reform.

In 2008, just two and a half years ago, recognition of the enactment of the NDEA fifty years earlier received only passing mention from most American educators and scholars. I confess that I did not attend, as I should have, the act's passage a half century earlier. Wayne Urban, on the other hand, did not forget. The NDEA deserved more from the field of education. Professor Urban's carefully researched and delightful book returns the NDEA story to the awareness of education scholars and practitioners that it merits.

The time was summer, 1958. As is common in Washington, DC, the heat was oppressive and the humidity routinely climbed high in the afternoon hours. And, in Congress, legislation moved very slowly, if at all, through the labyrinth of rules and hearings and background briefings, and photo-ops and strategy sessions that sought to persuade additional Senators and Representatives to support or to oppose specific legislation.

On July 1, I reported for my first post-doctoral position as Associate Secretary, Association for Supervision and Curriculum

Wayne J. Urban is Professor of Higher Education Administration at the University of Alabama where he is also Associate Director of the Educational Policy Center. From 1971 to 2005 he was Assoc. Professor, then Professor and finally Regents' Professor at the College of Education, Georgia State University.



Development (ASCD), then housed in the bluish glass-clad modernity of the National Education Association (NEA) building at the corner of 16<sup>th</sup> and M Street. Within hours, I became aware of several important things. ASCD was only minimally connected to the NEA, and the NEA was in hot pursuit of legislation that it believed would improve American schooling at the time. I also learned that my two car-pooling friends, Glen Robinson and Sid Dorros, both Associate Directors of NEA divisions, were

deeply involved in the support of that legislation, something called the Murray-Metcalf bill. The following day, I flew to Cleveland to attend some ASCD sessions at the 1958 NEA convention then underway. I recall, among a cacophony of speeches and commentaries and gossip, being drawn into the whirlpool of advocacy for another and different piece of legislation. It was called the National Defense Education Act, and NEA delegates had voted to support it against the pleas of their own leadership.

Efforts to push both of the two education bills upstream in the Congress continued against serious odds. A possibly devastating rapids was the threat of the Powell Amendment which would force most if not all southern congressmen to vote against the bill. Two other shoals were known rhetorically as “aid to religious schools” and, simply as “federal aid,” a term pronounced with a magnolia drawl that only slightly concealed the dreaded prospects of federal intrusion into states’ rights, specifically the right to maintain separate and grossly unequal dual school systems, one for whites, the other for Negroes. By late June, 1958, neither of the two bills was making substantial progress.

The so-called Murray-Metcalf bill, named for its two Montana sponsors and supported by the forceful rhetoric of William G. Carr and other NEA officials, was designed to provide federal funds to local school districts for both salary enhancement and new building construction. The Alabama duo of Senator Lister Hill and Representative Carl Elliott had introduced

another education bill, one not favored by the NEA. In reality, it was a hodge-podge of programs that had a particular and major virtue. It was *not* a “general support” of education bill. Both of these bills, as I remember them from that sweltering summer of 1958, had their strengths.

The Murray-Metcalf bill had some special virtues. For example, teachers at the time did receive low salaries and schools across the nation overflowed with students. One of the prominent ASCD Commissions with which I worked in my new post was titled “Crowding in Our Schools” and chaired by Harvard’s Robert Anderson. I offer evidence from my beginning year of teaching in 1950-51, in Ozona, TX, one of the richest districts in the state. The beginning state salary minimum that year for a teacher with a BA degree and no teaching experience was \$2,400. With a Master’s degree and no teaching experience, the state minimum salary was \$2,600. My district provided a local “bump up” of \$400 above state minimum levels. Ozona truly was a wealthy district. The small county seat town was also 75 miles and one bend in the highway from San Angelo, the closest serious market center, but distant even by West Texas standards.

Ozona’s minimum salary schedule was high for the state, but low in comparison with salaries in many other states. My teaching assignments included a sophomore English class that enrolled 45 students. I also had one freshman English class with 30 students. Class size matters, especially if a goal in the teaching of English is to strengthen students’

composition. One first grade class in our system enrolled 65 pupils. Most elementary school classrooms had no fewer than 40 children. Many classrooms in school districts across the nation enrolled many more children than the numbers in our Ozona classrooms.

By 1958, salary and classroom crowding conditions across the nation had not improved substantially. Attempts at improvement were mired in a sludge of inaction by local districts. I could understand the reasons, however self-serving, for the NEA’s push for the Murray-Metcalf bill. However, support of this position would yield heartbreak and a legislative disaster. As Urban points out so ably, this legislation dealt with salaries and school construction *in general*. The federal Congress had never before passed legislation like this proposal and that feature, by itself, hobbled the Murray-Metcalf position. Ordinarily, new legislation is more easily passed when it is very similar to previously passed legislation with quite limited goals.

On the other hand, the Hill-Elliott bill contained elements (e.g., loans and grants-in-aid) that were *not new* and *not necessarily* controversial in themselves. Moreover, its foci were matters which seemed to increasing numbers of Congressmen as beneficial without carrying the excessive baggage of the heavy slogan of the prospects of federal control of local schools. Its greatest advantage, to be sure, was blatantly symbolic. By June, the sponsors acceded to a political suggestion that they change the

name of their bill. It was a simple change as it was a sledge-hammer decision. The bill became the National Defense Education Act. Notably missing from the Act was *any* concern about the improvement of elementary schooling. Almost unnoticed was Title VII that focused on research and experimentation in the use of educational media (e.g., film, TV, radio).<sup>1</sup>

In the midst of a frigid cold war with the Soviet Union and with U.S. and North Korean troops observing a tenuous and testy ceasefire across the Korean peninsula, Americans in Congress and in “back homes” everywhere in the nation could recognize that this bill would spend federal monies *for* national defense. *Not* money for more weapons, but *for* national defense through focused improvement in several sharply focused fields of education, specifically in foreign language education, educational media, and, to a small extent, mathematics and science education, and counseling whose acknowledged if not asserted purpose was to recruit highly talented high school

students to become better physicists, mathematicians, and computer scientists for “our American” defense than “their” (i. e., Red, Soviet) scientists, mathematicians, and linguists.

Without intending to challenge Urban’s report that Stuart McClure, Senator Hill’s chief clerk, identified himself as the one who “invented the God-awful title: the National Defense Education Act” (Urban, p. 95), I call attention to a short conversation that I had with former Senator Ralph Yarbrough (D, TX) about 35 years ago. In his overview account of the NDEA, which he favored with his Democratic colleague, Lister Hill, Yarbrough recalled that the bill was facing some very rough going. I remember his saying that he suggested the addition of “National Defense” to the title because “no one will oppose national defense.” Yarbrough laughed. Even if Yarbrough claimed too much, his reasoning seems to have been accurate.

By September 1958, the NDEA legislation passed both houses of Congress. The Murray-Metcalf bill, on the other hand, never arrived on the floor of either the House or the Senate. The NDEA, surely an omnibus bill if ever one existed, provided general, but limited federal aid to American schools.

Urban narrates and analyzes the impact of NDEA, and I find his scholarship both impressive and consistent with what I remember from the times and with what I have come to understand. Of the ten titles in the Act, only two focused specifically on pre-collegiate schooling.

---

<sup>1</sup> As an ASCD Associate Secretary, I became quite involved in cooperative activities with the NEA Department of Audio-Visual Instruction (DAVI) in advancing the cause of this title, in particular, to urge responsible reflection on schools’ use of “new media” prior to its purchase of hardware (e.g., foreign language teaching laboratories, overhead projectors, teaching machines). These activities also pushed deliberately for research about the use of new media in schools at work. See, for example, Davis 1959, 1961; Reid and Davis, 1960).



Title X of the NDEA was a little recognized feature of the bill, but one that had an impressive impact on the general administration of education across the nation and, likely, was the most lasting of the bill's provisions. It provided \$50,000 to each state education agency to expand programs to provide reliable reporting of educational data. Only \$50,000 to each agency! Or, only \$2.5 million total! This provision at long last provided funds by which each of the fifty state agencies would develop the leadership (well prepared individuals) and facilities (computers and data processing equipment) by which each agency might report better and more accurate data to the US Office of Education about matters of significance. From its beginning, the USOE was charged to collect information from the several states, to analyze and to present information so that national education policy might be better informed and deliberated. However, states funded positions in their agencies according to their own interests and whims and the reliability of their reported data for many years must be questioned. Quite remarkably, however, research positions in the Southern state departments of education, at least since the late 1920s, had been subsidized and their chief officers trained at George Peabody College for Teachers and northern universities for different periods of time under appropriations by the General Education Board (GEB) as an integral element of its efforts to improve the schooling of southern Black children and youth (Davis, M.D., 2006). Title X could have been seen as a lagniappe to the 50 states, but it foreshadowed the closer integration of data

reporting and analyses to become routine in subsequent years, certainly during the years of ESEA funding and the more recent NCLB legislation. Once a road is constructed, additional uses for it are discovered.

Especially noteworthy is that NDEA's most significant thrusts were in higher education. Its fellowship program provided for 1,000 doctoral fellowships in new or expanded programs in any field of study, particularly for graduate students interested in becoming college teachers. Not as rich as National Science Foundation (NSF) fellowships, they nevertheless provided opportunities to many outstanding doctoral students especially to ones in new doctoral programs. My first PhD advisee at Kent State University held one of these fellowships and U.S. schooling was better, I believe, because of Jack Kean's teaching and research in language development, teaching, and curriculum development in language arts at the School of Education, University of Wisconsin, Madison, and, following his retirement, at the Wisconsin State Department of Education.

A significant bonanza to school counseling and guidance concentrations in universities was NDEA's Title V. Testing to identify student talents was emphasized and institutes at universities across the nation were funded and held during both the academic year and summers. Their purpose was to train counselors in test administration and interpretation and guidance in order to point talented youth toward academic programs and careers in sciences and

mathematics. I witnessed the impressive development of the counseling programs at Kent State as a function of these NDEA provisions, and I have inherited stories of the expansive counseling programs for school test-administrators and guidance counselors at The University of Texas at Austin and elsewhere. The NDEA's central effect on counselor education was real and substantial. The numbers of high quality counseling programs in the nation swelled. Without doubt, the numbers and quality of school counselors increased. However, I must admit to severe skepticism of the lasting pay-offs of the university preparation in counseling when its graduates encountered the realities of local school principal's expectations and the heavy loads of student advising and schedule making routinely assigned to them. Regrettably, that kind of follow-up programmatic research has not been done.

Title VI of the NDEA focused on foreign language area centers and foreign language institutes at colleges and universities. These institute programs followed the general pattern of those developed by the National Science Foundation for teachers of mathematics and science teachers, mainly in high schools. Candidly, I must admit to my early and persisting skepticism about the idea of improving the teaching of Spanish and French, in particular, when the metaphor of "national defense" in the real cold war at the time focused specifically on the USSR and countries in the Soviet orbit of influence. I wondered then and have never been satisfied by the failure of this NDEA title to focus most of its attention on what I

assumed to be the most critical areas of needed language competence by Americans for "defense" of the nation: essentially Russian, Chinese, Arabic, Swahili, Hindi, and Japanese. In a very real sense, these non-traditional languages (for U.S. schools) had no accepted "place" or "niche" in the high school program of studies. Spanish and French, and sometimes German, on the other hand, were offered widely in American high schools. Competition for a place in the curriculum seems routinely to favor the offering already secure in the program of studies, certainly those courses traditionally used for college entrance. Spanish and French, therefore, really were the only viable choice for strengthening through NDEA initiatives. Programs in Russian in universities received jump-starts and enhancement through NDEA provisions, but the effects, in all but rare cases, seldom reached more than a scattered few of the nation's secondary and elementary schools.

Wayne Urban, I am confident, is correct in his generalization. The NDEA impacted higher education much, much more than it affected secondary schools. Were this generalization his only conclusion, it would still be important.

Most observers, even those who believe they remember NDEA well, may be surprised by this conclusion. A substantial folklore, I believe, has developed that holds that NDEA was the tipping point for a reemphasis of intellectual and academic rigor in public school offerings. It is also widely believed that NDEA greased the skids for the widespread interest in, if not

the widespread adoption of, the many 1960s-era curriculum revision projects (e.g., PSSC Physics; SMSG mathematics, K-12; three new BSCS biology courses; Man, A Course of Study (MACOS)). Urban escaped this easy trap of popular myth; he knew that these curriculum development projects were National Science Foundation (NSF) projects, *not* ones derivative of the NDEA. Following Urban, practicing educators and policy analysts must remember to partition these NSF projects *out* of our recognition of the NDEA provisions. Similarly, the so-called “New” social studies, the “New” English grammar, reading, and composition programs were never a part of the NDEA’s original thrust. They came later, to be sure, but they were not present at the beginning.

In another of his conclusions, Urban is absolutely correct in his assessment of the NDEA. *It did not focus on science.* As well, it had very little impact on science and mathematics education in schools. However, I offer a very modest addendum to this general conclusion, one that seems consistent with his analysis.

We must remember that Sputnik, the tiny beeping satellite that began to orbit the earth in October 1957, provoked a major “made-in-America” shock. The Soviets got to outer space first! Or, as wags put it at the time, the German rocket scientists that the Soviet troops captured beat the German rocket scientists (e.g., Werner von Braun) that the U.S. troops had captured at Penemunde and elsewhere. Nevertheless, distracted and distraught Americans immediately “understood” that this Soviet “victory” in

space was clear evidence that the Russians actually *were* superior to Americans in applied sciences, in technology, likely, in military applications of space technology, and, certainly, in the field of education. The vision of a tiny Soviet satellite was to wreak special havoc on American life and imagination. U.S. military expenditures swelled and the Air Force’s Strategic Air Command increased its planning and production, and, later, placement of bomber fleets and, subsequently, missile emplacements were set to launch doomsday retaliation to the Soviets.

I contend that the generalized American reaction to Sputnik absolutely energized support for NDEA. The legislation became a metaphor with a message not very unlike the oath taken by newly commissioned Israeli AF officers on the summit of Masada: NEVER AGAIN! The U.S. will not be blindsided again by the perceived educational advantages of Soviet schooling. Truth seems always to be a casualty in war, in a so-called cold-war as well as in actual combat operations. But the metaphor of Sputnik was powerful in 1958, and I hold that its contribution to vicious and inaccurate judgments about American education served the purpose of making NDEA possible.

And what about science as a dominant player in American educational improvement, including the NDEA? Again, Professor Urban is correct. NDEA had little direct involvement in the improvement of American school science programs. It properly avoided political encounters with



NSF, the major U.S. effort to foster both scientific research and science education. On the other hand, the NDEA was constructed within the world view of perceptions that the U.S. suddenly had become deficient in science and science education and that deficiency placed the U.S. at immediate national peril. Of course, awareness of this perception as well as a few provisions for the implicit enhancement of science education surely eased the passage of NDEA.

Nevertheless, NDEA was much more than about science. To put the matter too simplistically, the vision of Sputnik and the general rhetorical support of science and its technology enabled the passage of NDEA, even though NDEA's provisions actually slighted specific measures to enhance American science. Furthermore, I believe that were solid research on the matter undertaken, the evidence would reveal that the NDEA failed to stimulate the recruitment of a generation of bright, talented American youth into scientific and technological careers. On the other hand, American education—particularly higher education—received specific federal attention. Subsequent efforts to provide federal support of education clearly would be easier political and legislative paths to tread because of the NDEA experience. And they have been.

I have not done justice to the breadth of Professor Urbans's *More than Sputnik and Science*. I hope that I have not subjected it to personal brands of injustice. With more time to read and to think and to write, I

believe that I could expand as well as to specify other appreciative and critical remarks. I know that Urban relishes the fruits of challenge and wonder, the significances of nuance and rhetoric and experience. So, readers of his excellent book have their work cut out. You see, Wayne Urban wrote his book. Now, our job is to read it carefully and sensitively, to think about the development of the NDEA, actually to think beyond what Urban wrote, to focus on matters that he believed to merit attention, and, even possibly, to consider how the NDEA paved the way for the No Child Left Behind Act of 2001 and the federal legislation that is sure to follow in years to come. We have an important task to engage.

## References

- Davis, M. D. (2006) Stimulation, sustenance, subversion: The General Education Board and Southern U.S. public education. *Journal of Educational Administration and History*, 38(3), 313-322.
- Davis, O. L., Jr. (1959) Dissemination via the conference method. *Audiovisual Instruction*, 4(October), 226-227.
- Davis, O. L., Jr. (1960) In the wake of the dissemination conferences. *Audiovisual Instruction*, 5 (February), 16-30.

Reid, C. and O. L. Davis, Jr. (60) Needed: A materials theory for a technological age, *Audiovisual Instruction*, 5 (February), 46-47.

### About the Reviewer

O. L. Davis, Jr., is Catherine Mae Parker Centennial Professor of Curriculum and Instruction, Emeritus, The University of Texas at Austin. He holds a Ph.D. (1958) from George Peabody College for Teachers. Throughout his professional career, Davis has focused his attention on curriculum development, practice, theory, and history, and on social studies education. In addition to his teaching, he has consulted with school systems, state departments of education, and other agencies in a number of states. An author or co-author/editor of more than 30 books and almost 200 reports of research or essays, he also has supervised more than 160 Ph.D. dissertation students. He served as Associate Editor, *American Educational*

*Research Journal* for one term and as Editor, *Journal of Curriculum and Supervision*, for twelve years. He has been President of the 170,000 member Association for Supervision and Curriculum Development; Society for the Study of Curriculum History; Kappa Delta Pi, international honor society in education; the American Association for Teaching and Curriculum, and the Organization of Educational Historians. Among Davis's honors are his election to the Laureate Chapter of Kappa Delta Pi in 1994 and his receipt of the 1974 NCSS Citation for Exemplary Research in Social Studies Education, the 1996 AERA Lifetime Achievement Award for Outstanding Contributions for Curriculum Studies, and the 1996 NCSS Distinguished Career Research in Social Studies Education Award.



Copyright is retained by the first or sole author,  
who grants right of first publication to the *Education Review*.

<http://www.edrev.info>

Editors

Gene V Glass

[glass@edrev.info](mailto:glass@edrev.info)

Gustavo Fischman

[fischman@edrev.info](mailto:fischman@edrev.info)

Melissa Cast-Brede