The Struggle for Adult Literacy Education in America

A Trilogy Of Notes on History, Research, Policy, & Practice in Adult Literacy Education

by

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The Trilogy

Part 1: Fighting Illiteracy in Times of War

Part 2: From Oracy to Literacy and Back Again: Investing in the Education of Adults, To Improve the Educability of Children

Part 3: Adult Education for Social Justice & Workforce Development
Part 1

Fighting Illiteracy in Times of War
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Introduction to Fighting Illiteracy in Times of War

During the spring at Valley Forge, General George Washington saw to it that illiterate troops of the Continental Army were taught to read. Chaplains were recruited as teachers (Weinert, 1979) and an abandoned hospital was converted into a camp schoolhouse for lessons in reading, writing, and arithmetic. Though we don’t know how many soldiers were taught to read, nor how well, we do know that lessons continued throughout the encampment at Valley Forge (Wilds, 1938, p. 257).

Later, during the Civil War, the Union Army provided many educational opportunities for former slaves (Cornish, 1952). Blassingame (1965) provides numerous examples of educational activities engaged in by officers of the Union Army, including the work of one General Banks who “…sought to eradicate the widespread illiteracy among the 18,585 Negro troops serving in the Department of the Gulf by appointing several members of the American Missionary Association as lieutenants in some of the colored regiments. Banks appointed these men for the sole purpose of teaching the Negro soldiers. Later, Banks realized that he could not procure enough teachers for the Negro soldiers. As a result, on November 30, 1864, Banks modified his system by ordering the chaplain in each regiment to teach the colored soldiers” (pp.156-157).

Teaching Soldiers to Read in the World Wars

Twentieth century wars with their battles are recorded in the timelines that construct our history, with images of the doughboys in the trenches of World War I, the Flag being raised over Iwo Jima in World War II, the battle for Heartbreak Ridge in the Korean War, and the sweltering, hell of jungle fighting in the Vietnam War.

Historians have studied and recorded these wars, their heroes and the harm suffered by millions of men, women and children. Not only historians, with their academic credentials,
have recorded these events. Millions of everyday soldiers have recorded their experiences in letters sent home. You may have read some of the collections of letters written to loved ones by soldiers fighting in a foreign land, or working at some camp distant from their home. Sometimes the letters are from generals who later became famous because of their leadership in battle, many are from lower ranking officers, and some are from enlisted men. But you have probably never read letters to the Editors of the July 1943 issue of *Our War*, a newspaper for soldiers learning to read and write in the Army’s Special Training Units in World War II:

To the Editors of *Our War*:
I go to school at Drew Field, Florida. I have learned to read and write letters. I am learning to be a good soldier so that I can help to protect my country.
Pvt. Hom W. Bow

To the Editors of *Our War*:
We are learning to read and write very well. I write letters home and read the letters that I get from home. I like to read and write.
Pvt. Edwin Williams

To the Editors of *Our War*:
This is my first letter in English. I have learned to read and write so that I can help protect our country.
Pvt. Porfirio C. Gutierrez

You’ve probably never read these or other letters like them because for most of us, war is usually portrayed as the rough and tumble of boot camp, with tough drill sergeants transforming rainbow clothed young men, and now women, too, into uniformed squads of disciplined troops ready for fighting and dying, spilling blood and guts, dodging bombs, bullets, and grenades. But from the Revolutionary War to the present, the Army has fought wars not only with bullets, bombs, and armor, but also with the written word.

Although the U. S. Army was involved in teaching reading to troops and former slaves even during the Revolutionary and
Civil wars, it was in the two world wars of the 20th century that it entered into adult literacy education in a big way. In 1917, during World War I, the Army sponsored the development of the first group-administered, standardized tests of “intelligence” for literates, illiterates or low literates, and non-English speaking recruits (Yerkes, 1921). This had the immediate effect at the time of providing “objective” evidence that large numbers of native-born young adults were not literate and that large numbers of immigrants were neither literate nor functional in the English language. This information fueled the cause of advocates of adult education who could claim that large numbers of adults were in need of literacy education and that large numbers of immigrants needed education to help them become “Americanized.”

On the one hand, the World War I experience with “intelligence” testing convinced some people that large numbers of adults, both native- and foreign-born, were mentally incapable of benefiting from adult education (Stubblefield & Keane, 1994, p. 187). On the other, in what was a second major influence of World War I on adult education, it was repeatedly shown that thousands of adults considered “uneducable” were able to acquire at least basic literacy in fairly brief periods of instruction of from six to twelve weeks. In World War I literacy education for both native- and foreign-born young adults was accomplished in so-called Development Battalions. Nearly twenty-five thousand illiterate and non-English-speaking troops had received such training by February 1919 (Stubblefield & Keane, 1994, p. 182).

Importantly, the military’s testing efforts during World War I developed the technology of standardized testing for sorting out opportunities of an educational or occupational nature for large groups of people. This had a major effect during World War II, when, in 1942, the tests of General Educational Development (GED) were developed to give military service members a chance to use their experience in the military to qualify for a high school education equivalency certificate (Baldwin, 1995, Rose, 1990). For tens of thousands of military service members who had cut short their high school
education to serve their nation during World War II, having the equivalence of a high school education permitted them to get jobs, use the GI Bill for further vocational training, or to pursue a college education. Many of those GIs who went on to college became the first in their families to earn a university degree (Olson, 1974). Today, the GED is widely used in both the United States and Canada to certify high school equivalency. In the United States, the national Adult Education and Literacy System (AELS), initiated officially in the Adult Education Act of 1966, devotes a significant portion of its resources to helping adults acquire the GED that has its technical origins in the World War I tests of “intelligence” and its practical utility in the educational needs of troops during World War II.

**Former Slave Girl Fights Illiteracy in the Civil War**

"Outside of the Fort were many skulls lying about; I have often moved them one side out of the path. The comrades and I would have wondered a bit as to which side of the war the men fought on, some said they were the skulls of our boys; some said they were the enemies; but as there was no definite way to know, it was never decided which could lay claim to them. They were a gruesome sight, those fleshless heads and grinning jaws, but by this time I had become used to worse things and did not feel as I would have earlier in my camp life."

--Susie King Taylor, 1902 (in Lerner, 1972)

Susie King Taylor was born a slave in Savannah, Georgia in 1848. She was raised by her grandmother who sent her and one of her brothers to the home of a free woman to learn to read and write, even though it was against the law for slaves to learn to read and write. As she explained in her 1902 book, "We went every day with our books wrapped in paper to prevent the police or white persons from seeing them."

(Taylor in Lerner, 1972)

During the Civil War the Union Army initiated the practice of enlisting freed African-Americans. But it was soon apparent that there were problems in using these men as soldiers. Among other problems, it was difficult for officers to communicate with illiterate former slaves. So promotion and advancement in the army was difficult for the African-
American soldiers. Many of them blamed this situation on their lack of education. In response to these needs, many officers initiated programs of education for the former slaves.

One officer, Colonel Thomas W. Higginson, of the 33rd United States Colored Infantry Regiment, appointed the chaplain as the regimental teacher. Higginson reportedly saw men at night gathered around a campfire, "spelling slow monosyllables out of a primer, a feat which always commands all ears, " and he observed that, "Their love of the spelling book is perfectly inexhaustible, -they stumbling on by themselves, or the blind leading the blind, with the same pathetic patience which they carry into everything. The chaplain is getting up a schoolhouse, where he will soon teach them as regularly as he can. But the alphabet must always be a very incidental business in a camp." (Cornish, 1952).

One of the people whom the chaplain engaged in teaching soldiers of the 33rd to read and write was Susie King Taylor (Blassingame, 1965). She went with the regiment to Florida where she reported that "I learned to handle a musket very well while in the regiment and could shoot straight and often hit the target. I assisted in cleaning the guns and used to fire them off, to see if the cartridges were dry, before cleaning and re-loading, each day. I thought this was great fun." (Taylor in Lerner, 1972, p. 101).

According to Taylor, "I taught a great many of the comrades in Company E to read and write when they were off duty,
nearly all were anxious to learn. My husband taught some also when it was convenient for him. I was very happy to know my efforts were successful in camp also very grateful for the appreciation of my services. I gave my services willingly for four years and three months without receiving a dollar" (Taylor in Lerner, 1972).

Throughout the Civil War, thousands of teachers, some modestly paid and many volunteers, worked, often under very arduous conditions, such as described above by Susie King Taylor, to educate the newly freed slaves who came to fight for the preservation of the United States of America. In just the Union Army’s Department of the Gulf (Louisiana, Mississippi, Alabama, Texas) by 1864 there were 95 schools with 9,571 children and 2,000 adults being taught by 162 teachers. By the war’s end it was estimated some 20,000 African-American troops had been taught to read "intelligently" (Blassingame, 1965).

No one knows how many adult literacy teachers gave their lives in the course of their service to the education of those soldiers, both blacks and whites, fighting for the preservation of the Union during the Civil War. But we can be certain that some, perhaps many, did give their lives for our nation in the war that took more lives than all the wars from the Revolutionary War through the Vietnam War combined.

Learning to Read With the Doughboys in World War I

Across America in 1917 millions of men were called to join in the "War to End All Wars." Known as "doughboys," for some reason that no one has ever figured out, the men were shipped to foreign shores as expeditionary forces to fight for freedom.

The military of World War I was the first to wage war in the new mechanized, technical world of armaments, ground and air transportation. No longer were simple skills of slogging through mud and firing a rifle enough to fight the enemy. In WWI there was a need for technically trained men for thousands of jobs. It was a shock to the military and civilian worlds alike when it was discovered that over a quarter of the men called for military service (over 700,000) were found to
be either illiterate or so low in literacy that they could not function in the Army.

One of the first educators to recognize the need for adult literacy training for the doughboys was Cora Wilson Stewart of Kentucky. She had initiated the first literacy schools for adults in Kentucky in 1911 and in this work she wrote the first series of readers for adults who were learning to read.

Drawing upon her experience with the literacy schools of Kentucky, Stewart convinced the Army that literacy training should be provided for men about to be drafted and for those who had already been enlisted. To further the cause, she wrote a reading instruction book called the Soldier’s First Book.

The lesson of the Soldier’s First Book were of either a functional nature and were based on experiences most of the men in the literacy programs had in their backgrounds, or they or they were inspirational to instill patriotism and positive morale in the men.

The National War Work Council of the Young Men’s Christian Association (Y.M.C.A.)

During WWI the task of providing reading and writing instruction for the doughboys fell largely to the Y.M.C.A. Many of the camps and cantonments of the Army established educational facilities and services provided by the National War Work Council of the Y.M.C.A.

One of the activities that the Y.M.C.A. undertook was the preparation of new instructional materials for the soldiers. Among these was the Camp Reader for American Soldiers first published in 1918. This reader was written by J. Duncan Spaeth, an English professor from Princeton University who was serving as Y.M.C.A. Director of Education at Camp Wheeler, Georgia.
The Camp Reader for American Soldiers used the same type of functional and inspirational approach as used by Cora Wilson Stewart in the Soldier’s First Book. However, in contrast to the approach to teaching reading that Stewart followed, which was a variant of the "word" or “sentence” methods, which de-emphasized the use of phonics, Spaeth was a strong proponent of phonics.

According to the Preface of the Camp Reader, "The essence of the method here advocated lies in the simultaneous acquisition of the ability to read words, to recognize and differentiate articulate sounds and sound groups, to associate them with visual symbols, and to write these symbols. The three types of association must go hand in hand, and it is therefore essential that in each hour part of the time be devoted to reading, part to phonic drill, and part to exercise in writing."

Lesson 11 from the Camp Reader illustrates the use of this three part approach to teaching soldiers to read in a functional context. It starts with sight words to be learned at the top of the page. Then sentences are given in which the words are used to show how the words are used to construct meaning. Next comes a sentence to be copied in practicing writing, then a sound drill is used to teach the decoding of words using a form of phonics instruction. As with Stewart’s Soldiers First Book, Spaeth’s Camp Reader began with short, simple familiar words and sentences and progressively moved into longer words and sentences.
World War I Recruit Education Centers

To prepare illiterate and non-English speaking troops for regular military duties many were sent to Recruit Education Centers (REC) around the country. At Camp Upton, New York, the REC taught illiterate and non-English speaking recruits following a course of instruction developed by Captain Garry C. Myers and instructors in the REC. With a Ph.D in Psychology from Columbia University, Myers was concerned that the military teaching of adults should “stimulate sentiment in favor of better educational opportunities for coming generations.” This was an early interest in the intergenerational transfer of literacy that today underpins many family literacy programs.

The course of instruction at Camp Upton was divided into six levels from low to high, and for each level special materials were prepared using illustrations, cartoons, caricatures, and stories. The goal was to make materials with a diversity of activities to meet the various interests of the recruits.

Long after World War I, in 1946, Myers and his wife Caroline, the first woman hired to teach illiterate adults in the Army in World War I, started a magazine for children called
Highlights for Children. The motto of the magazine was “Fun with a purpose”, which is still used on the magazine. As with the World War I materials, the magazine uses lots of illustrations, puzzles, cartoons and stories aimed at catching the interest of both children and their parents. The latter are encouraged to read to their children in keeping with the earlier idea of the intergenerational transfer of literacy from parents to their progeny. Today, with a circulation of some 2 million, Highlights for Children shows a continuity of teaching of children with those ideas and methods used by Myers in teaching literacy with adults in World War I.

From: “My Favorite Wayne County Senior” by Kent L. Brown
Editor-in-Chief, Highlights for Children
Learning to Read with Private Pete and Sailor Sam in World War II

During World War II, just as in World War I, the armed services once again faced the need to utilize hundreds of thousands of men who were poorly literate and many were non-English speakers. Like Myers, Paul Witty had a Ph. D from Columbia University in Psychology. He specialized in understanding the process of learning to read and in developing methods for helping students who were having difficulties in learning to read. With this background, he was called upon to serve as an education officer in the War Department.

Witty’s work before his Army job emphasized the importance of meeting children’s interests when teaching reading. This emphasis was brought into his work in the Army when, in May of 1943, the War Department published the "Army Reader". In this book, produced under Witty's direction, soldiers in the Army's literacy programs were introduced to Private Pete, a fictional soldier who was also learning reading, writing, and arithmetic. The idea was that soldiers would identify with Private Pete and be interested in what they were reading because they shared common experiences, such as sleeping in the barracks, eating in the mess hall, and so forth. He used this novel approach along with the use of various media, film strips, comic strips, photo novels, and other innovations.

The “Army Reader” that men studied in Special Training Units when they entered the Army had four parts. Part 1 introduced Private Pete and talked about all the things that the men experienced when they entered the Army and got their identification tags - “dog tags” as they came to be called.

Part 2 is entitled “Private Pete Writes a Letter” and it taught men how to write letters home. In Part 3, “The Army Pays Private Pete”, men were taught about their pay, allowances for dependents, and the arithmetic they needed to know to deal with their everyday needs in the Army. Part 4 of the
“Army Reader” focused on teaching the men about good citizenship. It discussed why they were in the Army and what they were fighting for.

All the materials were of a functional nature and were based on experiences most of the men in the Special Training Units had in their backgrounds, so they could build reading skills on the basis of their prior knowledge.

The functional approach was very similar to the approach used in the Dick and Jane readers for children. In those readers, care was taken to show children engaged in the kinds of activities with which most children were likely to be familiar. The idea was to first teach a list of basic sight words that were carefully chosen to be meaningful to the children in terms of their everyday experiences.

A similar approach to using the meaning-oriented, “word” or “look-say” method was used in developing the Army program. First soldiers were shown film strips that helped them develop a basic sight vocabulary of meaningful, Army-related words. Then they moved on to further word recognition and sentence reading and writing exercises.

The four parts of the “Army Reader” were carefully developed to start at about a 1st grade level and then each part
went up a grade level until at Part 4, men could read and write with 4th grade ability. At that time they were graduated from the Special Training Units and sent to the replacement camps in preparation for battle.

Sailor Sam of the U. S. Navy

The Navy started literacy programs after those of the Army were implemented. Like the Army, the Navy instruction taught reading in a functional context using the Navy Life program consisting of Navy Life Readers Books 1 and 2, and corresponding Navy Life workbooks. The goals of the Navy’s reading program, like those of the Army program, were aimed at getting men to a functional level of reading as soon as possible.

A similar approach to the Army’s meaning-oriented, “word” or “look-say” method was used in developing the Navy program. The instructions for teachers in “Navy Life Reader Book 1” illustrate this approach:

“Preliminary discussion of the pictures should be encouraged, both to promote concept development and to stimulate the student’s oral language facility. The “Words for Study” pages, which illustrate picturable words, should be developed as a preliminary to reading the stories which follow.”

In the Navy Reader Book 1, learners were introduced to a fictional sailor named Sailor Sam who served to introduce life in the Navy Camps as a basis for practicing reading skills while learning Navy-related terminology and concepts. By focusing on camp life, the Navy Readers were able to build new vocabulary and conceptual knowledge on the basis of the knowledge the sailors developed in their daily lives. The materials in Reader 1 gradually increased in length and complexity of sentence structure.

Following the mastery of materials in the Navy Life Reader 1, students moved into Navy Life Reader 2. The “Navy Life Reader, Book 2” informed teachers that, “A reader for Navy men should, in addition to its other functions, help to create a
permanent interest in reading, help the men to orient themselves in the meaning and objectives of the War, build morale, and create pride in the Navy.” To do this, the “Navy Life Readers” presented stories of Sailor Sam and others in a variety of battle action scenarios at sea and ashore. In this Reader, the first reading passage dealt with the start of the war with the bombing of Pearl Harbor. Here is an abridged extract of the passage:

[Start extract]

The First Shot of the War.

The big ships of the Navy were in port at Pearl Harbor. It was Sunday morning, 7 December 1941. The port was dark, for the night was not over. Outside the port other Navy ships were going over the sea. It was their job to keep a lookout for ships that did not belong to the American fleet. They were on guard.

Not far from Pearl Harbor a “tin can” was steaming along over the dark sea. Her watch was over and she was coming into port. Near her was an American minesweeper. The minesweeper was coming into port, too. The minesweeper reported that she had spotted something in the dark sea. It looked like a sub.

The skipper [of the “tin can”] did not know what sub it was. But no sub had a right to be near Pearl Harbor at that time. It was his job to sink that sub! He called all the sailors to their stations on deck. His ship was ready to fight.

The tin can raced toward the sub. An American plane that was flying over spotted the sub, too. They started to fire, and the sub was hit. It went down under the sea. It was sunk.
That was the first U.S. shot of the war. But this little fight did not stop the enemy. An hour later the enemy planes came over Pearl Harbor!

[End extract]

In their 1953 book, entitled The Uneducated, Ginsberg & Bray estimated that 35,000 men were assigned to the Navy’s Special Training Program which conducted the literacy program. Importantly, Dexter Fletcher, author of a history of literacy education in the Navy in World War II, stated in 1976, “In general, it seems reasonable to conclude with the authors [Ginsberg & Bray] that many or most of the illiterates appeared to make an acceptable adjustment to the Navy.” And of course, the Navy and other military services went on to win the battles of World War II and those who fought became known by Tom Brokaw as the “greatest generation”.

Voices of Gratitude for the World War II Literacy Programs

In his history of the Army Training of Illiterates in World War II, Samuel Goldberg talks about how much the families appreciated the military’s teaching their sons to read. Writing in the July 1943 issue of “Our War”, a newspaper for the literacy students of World War II, Private Porfirio C. Gutierrez wrote: “This is my first letter in English. I have learned to read and write so that I can help protect our country.”

A mother of a soldier wrote (original spellings and punctuation): “dear sir: I thank you all for Learning My child to read and wright I don’t Know how to thank you all Because My child did not know nothing it is realy high apprishated Because I did not have the time to send him to school I did not have no husband I raised him from a Baby By my self and now I am in my old stage and that is all my help and I thank you and I thank you when you wrote me and siad My Boy did that I was so glad I did not Know what to do and I realy appreshated it. Very truly Yours, M___ W____”
Clearly, it takes more than guns, bullets and bombs to win a war. The teachers working through Private Pete and Sailor Sam gave “esprit de corps” and hope to tens of thousands of men and their families through the power of literacy.

After WWII, Witty focused on teaching reading to children from primary through secondary school. As with the Army program, he stressed the importance of meeting children’s interests in teaching reading and the use of a variety of media, radio programs, comics, newspapers, and books to find and present materials that matched these interests. He wrote two reading series for children. He also served as an associate editor of the Highlights for Children magazine and the children’s newspaper, My Weekly Reader. The International Reading Association (now the International Literacy Association) which Witty helped found, offers the Paul A. Witty short story award for writers of children’s literature. This reflects his enduring concern that teaching reading, whether with adults, adolescents, or young children, should be built on matching the interests of these groups.

The Reading Formula That Helped Win World War II

During World War II, in what was known as the Army Specialized Training Program (ASTP), United States colleges were swamped by Army personnel who were on campus to take courses for hundreds of specialized skills needed to win the war. The courses these soldiers had to take were accelerated and highly concentrated, and they placed considerable demands on reading and mastering the content of difficult technical manuals. Under such conditions, many men were experiencing reading and learning difficulties.

At the Ohio State University, administrators sought methods that would help the military personnel on campus meet the challenges of their accelerated, technical courses. They found help in Professor Francis Robinson, a member of the psychology department faculty.
Robinson was selected to head a new Learning and Study Skills program that would teach military personnel to learn better by reading. Following his psychological research training, Robinson conducted studies of the students’ reading skills and found that they approached their reading using unsystematic, haphazard methods that failed to lead to good comprehension and retention.

After reviewing research and approaches to effective study skills, Robinson came up with a formula for reading and study that has endured for 70 years. He developed what is called the SQ3R method of reading and studying. In this method, students are taught to first Survey the text and to raise Questions about the meaning of what they are reading. Then they Read the text carefully, stopping now and then to construct and Recite to themselves summary statements of what they have just read. Later they Review what they have read.

First tested and proven in action with those who fought in World War II, the SQ3R method has found support in research leading to what is known today as the "active reading strategy," which guides readers to take actions before they read (as in surveying and questioning), while they read (as in reciting) and after they read (as in reviewing).

Based on Professor Robinson’s research and development to meet the demands for trained personnel during World War II, the SQ3R reading strategy has been in constant use by reading and study skills educators ever since. It has helped hundreds of thousands of veterans using the GI Bill and innumerable other adults succeed in their pursuit of high school, college, and other academic or technical degrees.

As we remember and give thanks to the millions of American men and women who fought to preserve freedom in World War II, let’s also remember Francis Robinson and the thousands of other reading educators who contributed to victory through the power of a force mightier than any weapon – the power of literacy.
Join the Conga Line for Literacy in World War II

Many readers may recall the "conga line" dance that has been in and out of widespread popularity several times since the 1930s, and often shows up at parties during the winter holiday season. It is probably less well known that there is a relationship of the conga to literacy education.

One, Two, Three, la Conga! One, Two, Three, la Conga!

During World War II many entertainers used their special talents and fame to support the war effort through the selling of war bonds or in encouraging men to enlist in the military services. One such entertainer was the great Cuban musician and band leader, Xavier Cugat. According to one report, Cugat recorded a song in 1941 about the need for Americans to support President Franklin D. Roosevelt in the war effort. Entitled, "Viva Roosevelt!" Cugat, the primary popularizer of the conga line dance, wrote:

"Viva Roosevelt! Viva Roosevelt! Oh what a señor! Ladies and Gents, get in the conga line of defense Come on and follow this leader, give him a vote of confidence."

One, Two, Three, la Conga! One, Two, Three, la Conga!

One of those who got "in the conga line of defense" was another Cuban musician, Desi Arnaz, who later became internationally famous in movies and as the real life and TV husband, Ricky Ricardo, of Lucile Ball in the wildly successful TV series, I Love Lucy. While living in New York, Arnaz was drafted in May of 1943. He suffered a torn knee cartilage, so he was assigned as a "limited service" soldier to a special camp where illiterate enlisted men were sent upon entry into the Army. In this camp, Desi Arnaz joined with thousands of other teachers in the camps for illiterates and worked at teaching illiterate soldiers how to read and write.
In his autobiography he states, "I wound up in another camp as an instructor of illiterates. I was there for about six months. I didn't know how many illiterates were drafted into the Army. I really didn't think there were that many illiterates in the whole country" (Arnaz, 1976, p. 146). As a literacy teacher, he was part of a long "conga line of literacy educators" who worked to make soldiers literate in World War II.

When the Army realized who Desi Arnaz was, they transferred him out of teaching literacy into the special services for bringing United Service Organization (USO) entertainment to the troops. Arnaz made certain that USO entertainment was made available to the language and literacy students in the special training units. He also volunteered at The Hollywood Canteen, the west coast counterpart of the Stage Door Canteen in New York, places where servicemen could relax away from war duties.

One, Two, Three, la Conga! One, Two, Three, la Conga!

Right across from New York, in New Jersey, another soldier, Private Arthur Neuman joined in the conga line of literacy teachers when he was also assigned to teach illiterate soldiers and non-English speaking soldiers to read and write in the Army's Special Training Unit in Atlantic City. In a 1998 MA thesis Marston Mischlich tells about the work of Private Neumann and said, "Not only did this educational training add value to the soldiers for their units, it also built their self-esteem." He gives an example of how important the Special Training Unit’s efforts were in a short letter from one of the
soldier student's mother which showed how important the schooling was to families of the soldiers:

"Dear Son George:  
Mother was so proud to get your letter, to think you could write a letter yourself. I will always keep it as a remembrance. God bless the man that taught you. It means so much to me to hear directly from you.”

One, Two, Three, la Conga!  One, Two, Three, la Conga!

Though statistics are difficult to come by, I estimate from reports that by April 1944 the "conga line of defense" made-up of WW II literacy instructors included some 5,291 personnel. Of these, around 641 were officers, 4,557 were enlisted men, and there were some 87 civilians. More than 1200 of these teachers were African-Americans. The efforts of all these teachers helped raise the literacy skills of over a quarter million soldiers and contributed to victory for freedom and democracy during World War II.

In the Army’s newspaper for soldiers learning to read, “Our War” for January 1944, the fictional Private Pete wrote a letter saying: “Dear Mom: … I know what I am working for in this war. I want everyone to be able to go to any church he chooses. I want everyone to have enough to eat. I want to be able to say what I think without being afraid. I want the right to do what I like. But I want to do the right thing…” Love, Pete.

Even though we have come a long way since World War II, we still need lots of Private Pete’s and Sailor Sam’s out in the trenches fighting for literacy to help millions of adults get enough to eat for themselves and their families, to learn to speak up for their rights and fulfill their obligations as citizens to keep our nation strong and free. Business, government, individuals - we all need to support the activities of these adult literacy educators and the adult learners they serve. We should do it because, like Private Pete, we want to do the right thing, and it IS the right thing to do!
Today, the conga line of literacy teachers includes hundreds of thousands of men and women working around the world to light the lamp of literacy for tens of millions of adult learners, who then go on to promote the education of hundreds of thousands of children. The work goes on, and slowly but surely the lamp of literacy is being illuminated in all the nations of the world. And the beat of the conga drum goes on: form a line, put your hands on the hips of the person in front of you and do la conga for literacy!

One, Two, Three for Literacy! One, Two, Three, for Literacy!

[G'night, Ricky… G'night, Lucy.]

**Learning to Read in the “Forgotten War” of Korea**

The Korean War raged for three years from June 25, 1950 to July 27, 1953. After it started, many lower aptitude personnel were inducted, almost 40 percent, who scored below the 31st percentile on the military’s new Armed Forces Qualification Test (Sticht, et al., 1987, p. 14). This meant that tens of thousands entered the military services with reading levels below the 8th grade level, and many were in need of reading instruction.
To meet the need for materials for teaching reading to undereducated inductees during the Korean War, the United States Armed Forces Institute (USAFI) made available reading instructional materials that were based to an extent on the World War II materials that featured Pete, a farmer who joined the Army. In the USAFI materials Private Pete is joined by his buddy, Bob, an automobile mechanic from Pete’s hometown, who enlisted in the Navy around the same time.

The USAFI book, Men in the Armed Forces: A Serviceman’s Reader, follows Pete and Bob as they leave their homes, ride a train to their training centers, discusses their military life, and then takes them back home on leave to meet with their sweethearts, Sue for Pete and Mary for Bob. While they are on leave they meet an airman named Joe Stone who is from their hometown. Joe is a sergeant in the Air Force. He describes some of his activities and training and they promise to keep in touch.

Neat the end of A Serviceman’s Reader, Pete is promoted to Sergeant and he asks his girlfriend Sue if she has an answer to a question he asked her when he and Bob were on leave. The book goes on to say, “Sue said nothing, for a minute. Then she answered, “Oh, Pete! I am sure now, that I want to marry you. I will wait for you. Let’s get married as soon as we can.”

In 1973, some 20 years following the end of the Korean War, I flew to South Korea for a meeting to discuss reading and English language needs of troops stationed there near the demilitarized zone with North Korea. From Seoul I helicoptered out to Camp Casey for a meeting with General Emerson, also known as “The Gunslinger” because he wore a cowboy-type pistol in a holster on his waist. The meeting did not last long, and I helicoptered back to Seoul and then flew back to the States. A few weeks following my meeting with The Gunslinger I learned that nothing came from our meeting.
Another 20 years passed and I found myself walking somberly by the Korean War Veterans Memorial near the Lincoln Memorial on the National Mall in Washington, DC. It was still under construction when I was there but there were already 19 large statues of military men from the Army, Marine Corps, Navy, and Air Force all dressed in combat clothes carrying weapons and wearing rain ponchos.

I wondered how many of those named on the memorial wall of the Korean War monument had learned to read or to read better in the 1950s following the experiences of Private Pete, Sailor Bob, and Airman Joe. The stories about Pete, Bob, Joe, Sue, and Mary were meant to portray an idealized story to boost the morale of men fighting in wars: leaving home, doing your duties, returning home, getting married and starting a family. Unfortunately, some 36,574 of the 5.8 million Americans who served in the Korean War died and did not get to live this storied life. I thought that finally, those who fought in the forgotten war were no longer forgotten.

The Functional Literacy (FLIT) Program of the Vietnam War Era

Whenever I visit Washington, DC I try to find time to honor those who died during the Vietnam War whose names are carved into the black stone of the Vietnam Veterans Memorial. This is a very personal experience for me because I came into contact with thousands of the young men who fought in Vietnam. Not just any of the young men, but a very special group, those who were the undereducated youth typically cast-off by society as losers.

During and after the Vietnam war, I directed the development of the Army’s Functional Literacy (FLIT) program for marginally literate personnel. This was the first program that
introduced systematic methods for studying literacy practices of personnel in various jobs and job training programs, incorporated these practices into the design of job-related literacy programs, and compared the effectiveness of general literacy programs to job-related programs. It was found that the latter produced as much improvement in general literacy as did the Army’s general literacy programs but three to five times the improvements in job-related literacy, which was what the programs were supposed to do.

Improving the reading skills of undereducated Army recruits took on a special meaning for both the adult literacy teachers and the new soldiers themselves. It was entirely possible that their lives and the lives of their comrades would depend upon their ability to read directions for administering first aid treatments to themselves and their buddies. I recall the enthusiasm with which small groups of men would work on a reading passage dealing with the four lifesaving first aid steps:

“First Aid

In combat or in the field, doctors and medics cannot be every place to treat injuries as they happen. You may have to give fast emergency care to yourself or to someone else. Such emergency medical care before a doctor or medic can see the patient is called first aid. The most immediate first aid steps are the four basic lifesaver steps. Follow these steps in order: (1) clear the airway and restore breathing and heartbeat (2) stop the bleeding (3) control shock (4) put on dressing and bandages.”

The first aid passage went on to discuss each of the four lifesaving steps. Men would read the passage and then draw pictures illustrating what the passage said. Or they would produce flow charts showing how to perform the four steps. Enthusiasm for reading and learning the four lifesaving steps had a great deal of functional meaning for these new recruit soldiers because they knew that in a war like that of Vietnam, they might really need to be able to read, comprehend, and use directions for administering first aid to stay alive.
The job-related, functional context literacy program that our team of teachers and researchers developed was implemented at all Army recruit training centers across the nation, including Fort Dix, New Jersey; Fort Jackson, South Carolina; Fort Polk, Louisiana; Fort Leonard Wood, Missouri; Fort Knox, Kentucky; and Fort Ord, California. In evaluation studies, some 3400 students taught by 30 teachers in these six states improved their reading ability by studying authentic job-related materials having real meaning and relevance to them.

I do not know which, if any, of the soldiers named on the Vietnam Veterans Memorial wall may have improved their reading skills in the Army’s literacy programs. Looking at the wall, I remember not just the fallen soldiers, but also the thousands of undereducated soldiers who came through these literacy programs, fought for their nation, and survived. I also recall that studies of hundreds of thousands of undereducated soldiers of the Vietnam war showed that some 85 percent of these young men, all of whom society had labeled as failures, actually fought with courage and completed their service honorably.

I have a special place in my thoughts for the hundreds of thousands of undereducated, less literate veterans who have served our nation honorably. I also think of the thousands of veteran adult literacy educators who, through their dedication to fighting illiteracy, helped thousands of these military personnel succeed. I have found no stone monuments to these
veterans of literacy education. But I know that their names are recorded in the book that records our nation’s struggle for freedom.

Later, the U. S. Navy and Air Force developed adult literacy programs following the job-related, functional context approach developed in the FLIT project. In 1987 colleagues and I published Cast-off Youth: Policy and Training Methods From the Military Experience (Sticht, et al, 1987) which articulated the principles for Functional Context Education (FCE) used in the FLIT program.

These principles were used in the U. S. Department of Education’s National Workplace Literacy Program. FCE principles were used by Wider Opportunities for Women (WOW) in their work with welfare mothers integrating literacy and vocational education. WOW demonstrated that the education of mothers could produce an intergenerational transfer of literacy and motivation for learning from parents to their children.

Ideas and innovations produced by adult literacy educators for military personnel have found their way into the literacy education of children, adolescents, and adults in civilian literacy programs. Three of these ideas are: First, program developers should take stock of the functional contexts of the learners, under what circumstances they live, etc. and draw upon this context in developing materials and methods. Second, programs should focus on meeting the interests of students and use a variety of media, methods, and materials to meet these interests. Third, educators should be aware of the intergenerational transfer of literacy and motivation for learning and strive to promote an understanding of this transfer with their adolescent and adult students who are or are likely to become parents.

In the early 1990s, I co-authored for the McGraw-Hill publishing company a 15 volume set of materials following FCE principles. These books integrated (contextualized) occupational, literacy, and numeracy education in five career
fields for use with adolescents in secondary schools and adults in post-secondary education.

**Songs in the Literacy Lessons of the World Wars**

During World War I the YMCA used a book called “Camp Reader for American Soldiers” to teach literacy to thousands of men who entered service as illiterate or non-English speaking soldiers. This book incorporated a number of songs that were used to help men learn to read and to maintain their morale while they were miles from home. A footnote on one page of the Camp Reader advised teachers to "Sing with class. Have pupils follow printed text as they sing. For writing lessons have pupils copy stanza 1 from script and write stanza 2 from print."

One of the songs used to teach literacy and keep up the morale of the literacy students was from England, and the chorus went like this:

Pack up your troubles in your old kit-bag,  
And smile, smile, smile,  
While you’ve a lucifer to light your fag,  
Smile, boys, that’s the style.  
What’s the use of worrying?
It never was worth while, so
Pack up your troubles in your old kit-bag,
And smile, smile, smile.

Another song helped the soldier literacy learners think of their loved ones and how they were fighting to keep them safe. The chorus was:

There's a long, long trail a-winding
Into the land of my dreams,
Where the nightingales are singing
And a white moon beams:
There's a long, long night of waiting
Until my dreams all come true;
Till the day when I'll be going down
That long, long trail with you.

The thought of returning from war to be with loved ones seems to always be on the minds of soldiers. During World War II over 250,000 illiterate or non-English speaking men were taught literacy in Special Training Units of the U.S. Army before being sent into battle. One innovation introduced in the literacy training programs was the use of a cartoon strip featuring fictional soldiers Private Pete and his sidekick Daffy. These cartoons were usually two page spreads in a special newspaper for literacy students called Our War.

Our War editors understood that the hearts and minds of the troops were on family and friends, often girl friends, back home. The cartoons sometimes told stories about visits with girl friends and included scenes in which Private Pete and friends were singing songs. One popular song of the time was aimed at making separations between the soldiers and their sweethearts more bearable. In the August 1943 issue of Our War the cartoon strip was about a letter Private Pete got from another soldier friend of his who told about how he was going overseas. A group of his buddies traveling in the back of a truck singing a song “Don’t Sit Under the Apple Tree”:
Don't Sit Under the Apple Tree

Don't sit under the apple tree with anyone else but me
Anyone else but me, anyone else but me
No! No! No!
Don't sit under the apple tree with anyone else but me
Till I come marchin' home

Don't go walkin' down Lover's Lane with anyone else but me
Anyone else but me, anyone else but me
No! No! No!
Don't go walkin' down Lover's Lane with anyone else but me
Till I come marchin' home

In Our War for March 1944 Private Pete and Daffy are spending a quiet Sunday in camp. They take in a movie, and afterward Daffy says, "This winds up a great day, Pete. I feel like singing, too!" A group of soldiers is then shown sitting in the barracks singing:
When the lights go on again all over the world  
And the boys are home again all over the world  
And rain or snow is all that may fall from the skies above  
A kiss won't mean "goodbye" but "Hello to love"

When the lights go on again all over the world  
And the ships will sail again all over the world  
Then we'll have time for things like wedding rings  
and free hearts will sing  
When the lights go on again all over the world

Whether we call it Veteran's Day in the United States, or Remembrance Day in Australia, Canada, Ireland, New Zealand and the United Kingdom, we remember and honor the millions of those who fought for liberty and freedom in times of the World Wars. We recall the heartfelt songs they sang, the words of which hundreds of thousands learned to read only after becoming soldiers. We think of the mums, dads, sisters, brothers, and sweethearts whose love sustained the soldiers in wars long ago and, sadly, in wars of today. We still wait "Till they come marchin' home" and "A kiss won't mean "goodbye" but "Hello to love."

**VESL for Victory and Independence**

Freedom and independence are never free. They are won by those willing to stand up and struggle for these bedrock human values.

Twice in the 20th century the people of the United States rose up to defend their freedom and independence. Among these people were hundreds of thousands of immigrants who came to the United States to gain these human rights and who then often found themselves fighting their own countrymen to keep these rights.

To rapidly teach the English language and literacy during wartime the Army followed a practice today called VESL: Vocational English-as-a-Second-Language, or sometimes "embedded", "integrated", or "contextualized" instruction. In
this educational method, English language instruction and vocational instruction are taught concurrently, in an integrated manner. In both World Wars I and II the teaching of English was integrated with the teaching of military-related and morale-building information to help the soldiers learn and perform their jobs better.

**VESL in World War I, 1917**

<table>
<thead>
<tr>
<th>See Uncle Sam.</th>
<th>U.S. stands for Uncle Sam.</th>
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<tr>
<td>U.S. stands for United States.</td>
<td>Uncle Sam stands for United States.</td>
</tr>
<tr>
<td>U.S.A. stands for United States of America.</td>
<td>I am for Uncle Sam.</td>
</tr>
<tr>
<td>I am for the United States of America.</td>
<td>I stand for Uncle Sam.</td>
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This is the second lesson in the "Camp Reader for American Soldiers" (Spaeth, 1919) used by thousands of foreign-born men who entered the Army in World War I and needed to learn the English language. In the first lesson, the men learned to say,"I am an American.”

Used to teach literacy and the English language in what were called Development Battalions, the Camp Reader was written by J. Duncan Spaeth, Professor of English at Princeton University, and Educational Director, Army Y. M. C. A. at Camp Wheeler in Georgia and Camp Jackson in South Carolina. The book is the first book I have found that intended to teach both native-born illiterates and foreign-born immigrants to read and write the English language. It also includes the first Teacher's Manual that presents a theoretical understanding of conversational and written English, including an introduction to "The Phonetic System of Reading" and an Appendix which serves as a separate Teacher's Manual for those instructing non-English speaking soldiers.
During World War I some 500,000 immigrants were drafted and thousands more volunteered for service (Ford, 2001, p. 137). While not all needed to learn English, tens of thousands did need to and did. One of those who volunteered for the Army was Louis Van Iersel, who was born in the Netherlands. He learned English with the help of the Y.M.C.A. and went to war in Germany. There he was credited for heroism which saved the lives of a thousand men and he was awarded America's highest military recognition, the Medal of Honor (Ford, 2001, p. 140).

VESL in World War II, 1943

World War II saw the nation once again enlisting hundreds of thousands of men with no or very low literacy skills and others of foreign birth who could speak and/or write little or no English. Once again, as in World War I, Special Training Units were established to teach literacy and English language to these soldiers.

One of the tools developed for teaching men to read and write was a newspaper entitled "Our War." In the April 1943 issue there is a comic strip which features Private Pete and his pal, Daffy, both fictional characters who are in a Special Training Unit learning to read and write. This strip also features Pedro, a friend of Pete and Daffy, who cannot speak good English, but is nonetheless a good soldier. In the strip, Pete and Daffy save Pedro from going A.W.O.L. (absent without official leave) by explaining what A.W.O.L. means. They offer to help Pedro whenever he is not sure about something, illustrating how soldiers from different cultural and language backgrounds can work together.

In another issue of "Our War" Private Porfirio C. Gutierrez, a soldier in a Special Training Unit wrote a letter home and said, "This is my first letter in English. I have learned to read and write so that I can help protect our country." By the war's end, over a quarter million troops had been taught literacy and/or English language in the Special Training Units.
VESL for Today's Immigrants

Today, many programs for those learning the English language follow a similar approach to that of the Army in World Wars I and II and embed or integrate the teaching of English within the functional context of vocational training. These VESL programs continue to help thousands of non-English speaking immigrants achieve social and economic freedom and independence in their newly chosen homeland. And they do it faster and with greater retention and completion rates than sequential programs of English language followed by vocational education.

When we celebrate Independence Day this July 4th, we can be grateful that the torch in the hand of the Statue of Liberty still shines and still stands as a beacon for those escaping oppression, terrorism, and poverty. Hundreds of thousands of immigrants from the past fought, and many died, so we could keep the torch of liberty beaming. Our freedom and independence is intact and thousands of new immigrants arrive each day to enjoy these human rights. But these rights are under attack still today, and sadly many of the new immigrants, like their forebears, will die fighting so that their families and their new American neighbors can continue to enjoy freedom and independence.

But freedom and independence are never free.

**Associationism, Behaviorism, Constructivism:**

**The ABCs of Adult Literacy Education**

From World War I in 1917, through World War II in the early 1940s, and up to the Vietnam War of the 1960s and early 1970s, the teaching of reading to illiterate, poorly literate, or non-English speaking solders was based on three different theoretical understandings of what makes learning effective.

During World War I, J. Duncan Spaeth, Director of Education at Camp Wheeler, Georgia and Camp Jackson, South Carolina, wrote the Camp Reader for American Soldiers for
teaching illiterate adults and non-English speakers to speak, read, and write the English language. In what is the earliest discussion of the theory of learning applied to adult literacy and language learning that I have found, Spaeth explains the four communication processes of listening, speaking, reading, and writing. He goes on to explain, "All four processes involve the formation of association habits, and the first principle to be emphasized is therefore repetition." This principle followed from the understanding that learning involves the formation of connections or "habits" among ideas or thoughts and that this happens automatically when the ideas are associated together repeatedly.

In the latter part of 1929, the Secretary of the Interior in the administration of President Hoover appointed a National Advisory Committee on Illiteracy. The next year, Dr. William S. Gray of the University of Chicago was asked to prepare guidance for teachers of adult literacy. In response, he prepared the Manual for Teachers of Adult Illiterates. In 1934 this was revised by Caroline Whipple, Mary Guyton, and Elizabeth Morriss, all adult educators, and renamed Manual for Teachers of Adult Elementary Students.

While the shift from "illiterates" to "adult elementary education" represented a major redirection in thinking about the needs of adult literacy and non-English speaking adults, the learning theory of associationism was still in effect. This is clear in a section on teaching reading to native-born adults or limited education: "During the first period students acquire a sight vocabulary of words of immediate value in adult reading and learn to read and interpret simple sentences relating to familiar experiences. This is a period in which special effort is necessary to establish rich, vivid, and permanent associations between printed or written words and their meaning and pronunciations."

During World War II, Paul Witty, a student of William S. Gray's, was called upon to develop literacy programs for illiterate, poorly literate, and non-English speaking recruits into the Army. As with Spaeth and Gray, Witty also followed the associationist principle of repetition, repetition, repetition.
to form associations among sight words and their underlying meanings. However, in addition to associationism, Witty was aware of the growing interest in behaviorism, with its understanding of learning as stimulus-response sequences. In a 1939 textbook entitled Reading and the Educative Process, Witty and his co-author, David Kopel, state, "Perhaps the unique characteristic of modern education is its recognition and application of the principle that the results of instruction should affect and influence behavior.” (p. iv). In designing the Army Reader Witty divided it into four units which progressed in difficulty. In keeping with the behavioral approach, he developed pre-unit and post-unit tests to measure the student’s change in reading behavior. This approach to the application of behavioral principles to the design of instruction was to find a much larger educational application in later years with the introduction and widespread use of programmed instruction.

In the late 1960s and early 1970s I was called upon to develop literacy programs for soldiers during the Vietnam War and into the All Volunteer Army. In developing what was called the Functional Literacy (FLIT) program I made use of associationism, behaviorism, and the newly emerging constructivism. The latter was based on the cognitive psychology that followed behaviorism in the mid-1950s and incorporated the concepts of mental functioning between stimulus and response that were excluded in behaviorism. The information processing models of mental functioning, with concepts of sensory memory, working memory and long term memory provided a cognitive architecture for analyzing some mental functions between stimuli and responses, and the central idea was developed that knowledge is actively constructed during learning rather than resulting from the automatic formation of associations due to repetition.

In the FLIT program two curriculum strands were developed. The first strand followed behavioral principles and consisted of instruction sequenced in modules similar to Witty's World War II Army Reader, with pre-and post-module tests to assess learning mastery of the material in the modules. This was self-paced, individualized learning in a semi-programmed
manner. In strand two students worked in teams to study written passages of some 300-400 words and transform them into either pictures, matrices, or flow charts. These were social constructivist activities involving the active use of prior knowledge to transform the new information in the written passages from one form of representation into another representation of the knowledge in the passages.

An important point is that, in the movement from associationism, to behaviorism, to constructivism in World Wars I, II, and the Vietnam War, all the literacy programs used functional context materials representing the daily lives of the soldiers and the future work they would be doing. This ensured that experiential prior knowledge was formed as the basis for comprehending new knowledge, it motivated learning by making clear the connection between the content of the lessons and its practical use, and it facilitated transfer of literacy learning from the classroom to the "real world" in which the soldiers would live - - or die.

It is now clear, after over a hundred years of the practice of adult literacy education, that the ABCs of learning are still valid in various teaching and learning situations. Repetition, observations of changes in behavior, and the active construction of knowledge all have their applications in the teaching and learning process. And always, teaching the ABCs in a functional context serves the interests of adults.

**Paul Witty & Private Pete in World War II**

During World War II the armed services faced the need to utilize hundreds of thousands of men who were illiterate or poorly literate. Paul Andrew Witty, with an M.A. (1923) and Ph. D. (1931) from Columbia University in Psychology, specialized in understanding the process of learning to read and in developing methods for helping students who were having difficulties in learning to read. With this background, he was called upon to serve as an education officer in the War Department.
In his work for the Army’s Special Training Units for literacy instruction, Witty directed the production of numerous adult literacy education materials which today would be known as developing "multiple literacies":

(1) The first film media materials including a 1943 film strip entitled Meet Private Pete which introduced 40 sight words. In this film strip, soldiers were introduced to Private Pete, a fictional fellow member of a Special Training Unit who was also learning reading, writing, and arithmetic. The idea was that soldier's would be able to identify with Private Pete and understand what they were reading about him because they shared common experiences, such as living in the camp, sleeping in the barracks, eating in the mess hall, and so forth. Witty was apparently the first adult literacy educator to use this approach of trying to motivate adults learning to read by providing a fictional counterpart with whom they could identify.

(2) Witty introduced Army Technical Manual TM 21-500, entitled the "Army Reader" which provided practice in reading the words used in the film strip. The Army Reader was divided into four parts, from least to most difficult, and dealt not only with reading but also writing and arithmetic for daily camp life and meeting family obligations for insurance, allotments for spouses, and so forth.

(3) The first systematic approach to assessing progress in learning to read was introduced by Witty in TM 21-500 by the use of pre- and post-unit tests for each part of the four part manual to determine if the soldier was ready to progress from one part to the next, more difficult part of the reading program.

(4) A comic strip which appeared in a special newspaper for soldiers learning to read called Our War featured Witty’s Private Pete and his buddy Daffy in various activities that were frequently aligned with major holidays such as Thanksgiving, Christmas, New Years Day, Valentine’s Day and so forth.
(5) The first photo novella for teaching adults to read used real people as models for Private Pete, Daffy, and other fictional soldiers portrayed in materials for soldiers who were getting ready to be discharged from the Army but who had missed entry literacy education in the Special Training Units. In this approach Witty took photos of soldiers who modeled Private Pete, Daffy, and others engaged in various activities as they prepare to get discharged and as they travel home.

The trip home includes a ride aboard a ship that passes the Statue of Liberty. One photo shows a group of soldiers passing the skyline of New York City and a second shows a group looking at the Statue of Liberty. One of the soldiers says, "It is hard to tell how I feel. Everybody has this feeling when he first sees the Statue of Liberty. She has welcomed many human beings to this country. She has furnished hope for many men. To some, she stands for justice. To others, she represents freedom and a kindly feeling for all human beings." In the final pages of the photo novel Private Pete, now civilian Pete Smith and back home again, marries his pre-war sweetheart Mary on Christmas day and they build a home together.
Witty's approach reflected the influence of William S. Gray, one of the founders of the famous Dick and Jane series for children, which provided a model for Witty's use of Private Pete in the Army's literacy programs, and Arthur I. Gates, a leading reading professor at Columbia University. Both of these men were advocates of the "meaning emphasis" approach known as the "word" method. In this method students first develop readiness to read by discussing illustrations from the readers. Then they learn a basic store of sight words used in the readiness training. Then they move on to simple sentences made up of the sight words. In this approach, phonics instruction is postponed until the student can do quite a bit of reading based upon discussion and whole word recognition training.

Positive Outcomes From the World War II Literacy Education

Among the major outcomes of the teaching of illiterates in World War II was the demonstration that hundreds of thousands of adults whom many thought were not capable of learning to read were, in fact, capable of acquiring at least rudimentary reading ability in a fairly brief time, generally less than three months. Furthermore most of them went on to learn and perform their Army duties in a satisfactory manner.

There are lessons here regarding factors important in teaching reading for children, adolescents and adults. In World War II the functional nature of the material, relating as it did to the daily lives and needs of soldiers, created motivation for learning that may be missed in many instructional contexts. For reading teachers, the main lesson may be that what makes the most difference in teaching reading may not be reading methods such as the so-called "meaning" or "code" methods, but rather an emphasis upon the interests of the readers and an understanding of the factors underlying their desire for learning.
Toward A "Marshall Plan" for Adult Literacy in Industrialized Nations

The book I am holding in my hand, Technical Manual 21-500, Army Reader, dated May 14, 1943 has two names on the outside cover. One name is stamped on the cover with an ink stamp, A. F. Gallina, the other name is hand written, James Thomas. Both of these young men enlisted in the Army in World War II in Newark, New Jersey, and they were assigned to a Special Training Unit in which poorly literate or non-English speaking recruits were sent before being transferred on to regular assignments.

The book which these men held in their hands over half a century ago was used to teach reading in the Special Training Units. It featured a fictional soldier, Private Pete, who, like the soldiers in the Special Training Units, was learning to read and write. In the final section of the Army Reader, fictional soldiers were learning about the war and the allies of the United States in Europe and other nations. Reading this book, Gallina, Thomas, and some quarter of a million soldiers learned about the war that the whole world was fighting. On a page at the end of the book the authorization of the book as an official Army technical manual appears. Dated 12-2-43, it says, By order of the Secretary of War: G. C. Marshall, Chief of Staff.

Just four years later, on the 5th of June, 1947, General George Catlett Marshall, the Army Chief of Staff who carried out the order of the Secretary of War to produce a technical manual to teach non-literate and non-English speaking recruits to read and write, appeared before an assemblage of dignitaries at Harvard University. This time he appeared as the Secretary of State of the United States of America and he gave the outlines of a plan that would help reconstruct the culture, economy, and spirits of the European allies of the United States during World War II. This plan became known as the Marshall Plan, the greatest act of reconstruction following the destruction of war ever to have occurred.
To implement the Marshall Plan, a coalition was formed which could bring together the partners of the reconstruction. This coalition was officially named the Organization for European Economic Co-operation (OEEC). In 1961, the OEEC was transformed into the present Organization for Economic Co-operation and Development (OECD).

Some 35 years later, in the mid-1990s, the OECD released a series of reports giving the results of an International Adult Literacy Survey (IALS). This survey revealed that living in member nations of the OECD were more than 100 million adults between the ages of 16 to 65 with literacy levels so low that their abilities to thrive in modern economies was threatened. In 2003 and 2006 follow-up surveys by the OECD confirmed that over 100 million poorly literate adults are still dwelling within the richest and most advanced nations on earth.

In the 1940s General G. C. Marshall signed into existence the Army Readers that helped hundreds of thousands of functionally illiterate soldiers learn to read and write so they could stay in touch with their loved ones during the War, and function better after the War. Then as Secretary of State, George C. Marshall proposed a plan that eventually lead to the reconstruction of Europe following the most destructive war known to humankind. In making his proposal, General Marshal said that policy should be directed not at nations "but against hunger, poverty, desperation and chaos. Its purpose should be the revival of a working economy in the world so as to permit the emergence of political and social conditions in which free institutions can exist."

Today there are no uniform policies formed by coalitions of nations within the OECD and supported by international resources to help in the reconstruction of tens of millions of lives at risk for low literacy. Instead, each nation in the OECD has to take independent actions within its own borders to solve its own literacy problems.
Among over a hundred million citizens of the industrialized world, hunger, poverty, desperation and chaos still exist. But what is not here today is a Marshall Plan, with policies aimed at reconstructing the lives of the millions of poorly literate adults now living in Europe, the United States, and other industrialized nations.

In formulating any sort of Marshall Plan for adult literacy within the industrialized nations, we need to once again consider the words of Secretary of State Marshall, "the whole world of the future hangs on a proper judgment. What are the reactions of the people? What are the justifications of those reactions? What are the sufferings? What is needed? What can best be done? What must be done?"

As we close the year 2017, the 70th anniversary of the Marshall Plan, these questions still beg for answers when considering the plight of over 100 million adults threatened by low literacy and living marginalized lives in the richest nations on earth. What are the sufferings? What must be done?

**Swinging the Sword of Literacy in Iraq**

In August of 1979 I was invited by the Director-General of UNESCO to become a member of the jury which annually selects winners of UNESCO literacy prizes. I gladly accepted the invitation and some two weeks later I traveled to Paris to begin what became 25 years of service on the International Jury for Literacy Prizes.

In my first year of Jury duty I read a candidature submitted by the government of Iraq. Following discussion of the candidature by all members of the Jury, it was decided to award one of the literacy prizes for 1979 to the Supreme Council of the National Campaign for Compulsory Literacy of Iraq for initiating the campaign. Later, historians A. Al-Rubaiy and K. Al-Zubaidy, writing in 1990, reported that, “By 1980 the campaign claimed 1,588,997 citizens had become literate. This figure represents 76.4% of the 2.3 million target population of 15-45 year-olds. Real gains have been made,
yet, in spite of the campaign's figures, it is still too soon to evaluate the program in terms of achieving a high degree of adult literacy.”

Thirty years after receiving a UNESCO literacy prize in 1979, UNESCO put out a press release on International Literacy Day of September 8, 2009 stating that “The Iraqi adult illiteracy rate is now one of the highest in the Arab region, particularly in rural areas, where almost 30% of the population is unable to read or write. Significant gender disparities are also a matter of concern with illiteracy rates higher than 40% among women.” The press release announced UNESCO’s commitment to reducing Iraq’s illiteracy rate by 50 percent by 2015.

What happened to Iraq’s high level of literacy following the National Literacy Campaign of the late 1970s? According to a July 2008 newspaper article by Army Spc. Tiffany Evans, from the Multi-National Division, Center for Public Affairs in Iraq, “…war and economic hardships have caused the education system to suffer significantly in the last two decades. Schools fell into disrepair, enrollment dropped, and literacy levels stagnated.”

Now a new National Literacy Campaign has been initiated by the Iraqi government to meet pressing needs, including the need for security against terrorist attacks. In keeping with the National Literacy Campaign, adult literacy programs have been initiated by coalition forces in Hawijah to help some 500 men aged 18 to 30 years acquire literacy needed to join the Iraqi Army. A news article by Staff Sgt. Margaret Nelson in June, 2008 quoted Ahmad Magebi Abdullah, a Sunni-Arab attending the literacy program, saying, “I couldn’t go to school in the past because it was too dangerous. I want to have an education. I want to be able to read and write. There was no hope until now.”

The coalition forces literacy program costs about $450 per student in the initial program conducted by coalition forces. It provides a model for the National Literacy Campaign with the Iraqi Ministry of Education funding future programs.
According to coalition forces leadership, “Its money well spent. The true Al Qaeda in Iraq uses this lack of education to generate willingness to participate in their activities…the majority of their membership is illiterate and uneducated.”

According to Army Major Virginia Brady, “Literacy helps to cultivate one’s critical thinking skills. Critical thinking skills change the way a mind works and thinks about stuff. Children copy their parents, and by educating the adults, the children will want to learn, too.” Brady goes on to explain that “Women, in particular, directly affect children’s perceptions….a government-supported program could change how women perceive their world, and they can change how children see the world.”

These are hopeful thoughts. But from my experience in seeing adult literacy education move from the margins to the mainstream of thought in Iraq in 1979 and then have to do it all over again in 2009, I have learned that literacy is a double-edged sword that cuts two ways. It can embolden those with ideas bent on domination, or it can empower those with ideas aimed at liberty and freedom.

Now the question is - which way will the sword swing this time in Iraq?

Waiting for the Watermelons: Remembering 9/11

In my lifetime I have witnessed two major acts of war against America. The first occurred on December 7th, 1941 when the military forces of the nation of Japan bombed Pearl Harbor in Hawaii. "A day that will live in infamy" declared President Franklin D. Roosevelt. Four years later, the allied forces of World War II celebrated VJ Day – Victory in Japan! The war was over. My family and I, and a lot of our fellow migrant workers who were picking and cutting peaches in the orchards around San Jose, California, celebrated the war’s end when the orchard owner showed up with a truck load of fresh watermelons and we all dug in!
Some sixty years after the attack on Pearl Harbor, on September 11th, 2001, I experienced the second major act of war against America – the suicidal bombing by terrorists of the World Trade Center towers in New York City using airplanes as armed missiles with hundreds of passengers on board.

Seven months later, in April 2002, I was in New York to present a seminar at the Literacy Assistance Center (LAC), one of the premier adult literacy organizations in the nation. It was utterly devastating to walk past the memorials pasted on walls in remembrance of loved ones in the vicinity of the bombed out World Trade Center. It was even more moving when I met with and talked with members of the LAC and listened to their stories about how they had experienced the 9/11 attack.

A couple of months later, in June of 2002, writing in the Literacy Harvest, the journal of the LAC, Jan Gallagher, the editor, said, "As I write at the beginning of June 2002, the cleanup effort at the former World Trade Center has just ended. I suppose this could be another opportunity for New Yorkers to put the events of September 11, 2001, behind us and get on with our lives and our work.

Perhaps some New Yorkers —at least those not closely affected by the tragedy—are managing to do just that. But at
the Literacy Assistance Center (LAC)—located six blocks from what we still call Ground Zero—we continue to be affected by last year’s terrorist attacks and their aftermath in ways large and small. We cannot escape the fact that the adult education programs we serve—and, more to the point, the poor, working-class, and immigrant students they serve—continue to be affected by the economic, political, and social consequences of living in a city that has been bombed and in a nation that is at war."

Even now, 16 years after 9/11, we are living in a nation that is still at war with terrorists around the globe and at home. Adult literacy educators know that millions of the students they have served and continue to serve suffer from a form of terror that results from fighting chronic poverty, marginalization, and social exclusion. In the past I have likened the life circumstances of millions of our adult learners as experiencing conditions similar to the use of the "3 Ds" - dread, debilitation, and dependence - used to break down the resistance of prisoners of war so that they can be "brainwashed" to accept the conditions of their life.

Today, dread, debilitation, and dependency instill constant stress, fatigue, and terror in the lives of millions of undereducated, poorly literate adults and too often form a psychological barrier that keeps them from enrolling in literacy programs. But through literacy education, adults may not only learn to read and write, they may learn to overpower the psychological brainwashing of the 3 Ds that has kept them and their families in poverty, social exclusion, and political subservience. Conceivably, by combating the terrorism caused by the 3 Ds amongst impoverished and illiterate or marginally literate adults, in all nations, we can also combat a significant part of the terrorism caused by bombs and other weapons of war.

Adult literacy education is a formidable weapon against terrorism in both war and peace. It is a weapon drastically in need 16 years after the terror of 9/11. I was there to celebrate the end of World War II. I wonder when the present terrorism wars will end. Soon, I hope. I’m waiting for the watermelons.
If we focus our limited resources on reaching first-time parents, then one “dose” of parenting, could also benefit succeeding children.

[Sticht, 2011]

Part 2
From Oracy to Literacy and Back Again: Investing in the Education of Adults, To Improve the Educability of Children!

Mothers enrolled in basic-skills programs reported that they spoke with their children about school more, read to them more, and took them to the library more.

[Sticht, 2011]
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Oracy, Adult Literacy Research, and The Fourth-Grade Plunge

[Introductory note: The term “oracy” referring to listening and speaking was coined by Andrew Wilkinson of the United Kingdom in the 1960s. The word “auding” as a parallel term to reading was coined by a blind student, D. P. Brown, in 1954 while working on his Ph.D at Stanford University. He drew the parallel as: hearing, listening, auding in relation to seeing, looking, reading. Both auding and reading involve the use of language in addition to the specific modality factors. All auding includes listening and hearing while languaging. All reading includes looking and seeing while languaging. Languaging refers to the processes involved in producing language representations of knowledge.]

In September 2002, The Partnership for Reading published a report authored by John Kruidenier entitled Research-Based Principles for Adult Basic Education Reading Instruction. The report laments the paucity of research on adult reading and discusses how it draws upon K-12 research to inform adult reading instruction when that is appropriate. Missing in most of the recent guidance on scientific, evidence-base research for teaching children to read is any reference to adult literacy research that can inform K-12 educational practice.
However, the Spring 2003 issue of the American Educator, a journal of the American Federation of Teachers, an AFL-CIO labor organization for educators, published a special issue with the title ‘The Fourth-Grade Plunge: The Cause, the Cure”. The cover of the special includes a summary that states: "In fourth grade, poor children’s reading comprehension starts a drastic decline-and rarely recovers. The Cause: They hear millions fewer words at home than do their advantaged peers-and since words represent knowledge, they don’t gain the knowledge that underpins reading comprehension. The Cure: Immerse these children, and the many others whose comprehension is low, in words and the knowledge the words represent-as early as possible.

Inside the journal, the major article is by E. D. Hirsch, Jr., author of the best-selling, and controversial book Cultural Literacy. In the present article, Hirsch offers one approach to building children’s comprehension ability in a section called, Build Oral Comprehension and Background Knowledge. The section begins with the statement, "Thomas Sticht has shown that oral comprehension typically places an upper limit on reading comprehension; if you don’t recognize and understand the word when you hear it, you also won’t be able to comprehend it when reading. This tells us something very important: oral comprehension generally needs to be developed in our youngest readers if we want them to be good readers." Hirsch cites Sticht, et al (1974) in support of his statement. In an earlier book Hirsch (1996) has referred to the limits of oral language comprehension on reading comprehension once decoding has been acquired as "Sticht’s Law."

Later in this special issue of the American Educator, Andrew Biemiller, a professor at the Institute of Child Study at the University of Toronto extends Hirsch’s point in an article entitled, Oral Comprehension Sets the Ceiling on Reading Comprehension. In support of his argument Biemiller cites a chapter by Sticht & James (1984) which includes an extended discussion of the concepts of "oracy to literacy transfer" and the use of listening assessment to determine "reading potential."
What I have found particularly interesting is that these articles cite research by colleagues and myself that was done as part of a program of research to better understand adult reading education, not childhood reading. Almost 30 years ago, to aid in the better understanding of adult literacy issues, colleagues and I wrote Auding and Reading: A Developmental Model to provide a summary and synthesis of how the "typical child," a theoretical abstraction of course, born into our literate society grows up to become literate in the judgment of other adults. This was done to provide a frame of reference for better understanding how it is that some children, unlike the "typical child," grow up to be less than adequately literate in the judgment of other adults and might benefit from participating in an adult literacy program.

The Auding and Reading book offered guidance for adult reading instruction that presaged the present guidance in the American Educator for K-12 education. For instance, on page 122 of Auding and Reading we stated the need for: "Methods for improving oral language skills as foundation skills for reading. In this regard, it would seem that, at least with beginning or unskilled readers, a sequence of instruction in which vocabulary and concepts are first introduced and learned via oracy skills would reduce the learning burden by not requiring the learning of both vocabulary and decoding skills at the same time. It is difficult to see how a person can learn to recognize printed words by "sounding them out" through some decoding scheme if, in fact, the words are not in the oral language of the learner. Thus an oracy-to-literacy sequence of training would seem desirable in teaching vocabulary and concepts to unskilled readers."

The Auding and Reading book goes on to discuss concepts of automaticity in decoding, which underlies fluency of decoding in both auding and reading and why it is important to develop fluency (automaticity) of decoding for the constructive processes involved in comprehension by languaging to proceed either by auding (listening to and comprehending the spoken language) or by reading the written language.
It is indicative of the rather long time that it takes for ideas to be disseminated and assimilated in a field of knowledge that this year the American Educator, which reaches a million or so educators, has brought many of the ideas from adult literacy research into the arena of K-12 education.

There remains a need for further understanding of the life span changes that affect reading. For instance, the National Adult Literacy Survey (NALS) of 1993 indicated that as adults got older, their performance of NALS literacy tasks dropped. In research on the use of the telephone to assess literacy, colleagues and I found that we could draw upon the theoretical foundation of literacy given in the Auding and Reading book and subsequent research on listening and reading to assess knowledge development across the life span. In this case, we found that older adults knew more than younger adults about a wide range of subjects.

We used techniques that did not overload working memory like most of the NALS tasks do. Because older adults generally lose some working memory capacity, we felt that NALS type tasks are inappropriate for assessing the literacy ability of older adults. Whatever the case, the fact that adults change across the life span argues for more research to better understand literacy development in adulthood beyond what we have learned today and what we can gleam from studying the literacy development of children.

Interestingly, as the American Educator for Spring 2003 illustrates, what new learning we acquire about adult literacy development across the life span may have additional, important implications for K-12 literacy education. This adds weight to the importance of policies that emphasize the need for research on adult literacy education.
Vienna’s magnificent Rathaus, or Town Hall, hosted an evening dinner and ball for the International Reading Association’s 5th World Congress on Reading in August of 1974. My wife, Jan, and I were seated with George and Evelyn Spache. At the time I was conducting research using the Diagnostic Reading Scales (DRS) that George had developed in the 1960s and revised in 1972. We discussed the “reading potential” concept that the DRS were designed to measure by revealing the grade level at which a person could comprehend a story by listening in comparison to the level at which they could comprehend stories by reading. If listeners could listen to and comprehend up to an 8th grade passage but could only comprehend up to passages at the 5th grade level by reading, then they were said to have a 5th grade reading level but an 8th grade “reading potential.”
Also in 1974, colleagues and I published an extensive review of listening and reading research in which we found that empirical studies confirmed the idea of "reading potential" and indicated that, on average, listening comprehension (auding) ability surpassed reading ability with children from kindergarten up to about the 7th or 8th grades when listening and reading converged and became equal means of comprehending spoken or written language (Sticht, et al, 1974).

Our review also showed that children with greater listening comprehension ability before beginning school tended to become the better readers after entering school and learning print decoding and those with less listening comprehension ability tended to become the weaker readers after learning to decode the written language.

A decade later, in 1984, I participated in a national conference in support of President Reagan’s Adult Literacy Initiative which he had announced on September 7, 1983. At lunch I sat at a table with E. D. “Don” Hirsch, Jr. who was also a speaker at the conference. His presentation included a summary of research showing that both children’s and adults’ prior knowledge about a topic helped them to read and comprehend that topic. He stated: “Adult literacy is less a system of skills than a system of information. What chiefely counts in higher reading competence is the amount of relevant prior knowledge that readers have” (Hirsch, 1984).

In 1996, Hirsch wrote that conceptual and vocabulary knowledge gained by children through speaking and listening to oral language greatly affected their ability to comprehend by reading. He said: “I have not yet mentioned reading and writing. That is because speaking and listening competencies are primary. There is a linguistic law that deserves to be called “Sticht’s Law” having been disclosed by some excellent research by Thomas Sticht. He found that reading ability in non-deaf children cannot exceed their listening ability. …Sticht showed that, for most children, by seventh grade the ability to read with speed and comprehension and
the ability to listen had become identical” (Hirsch, 1996, pp. 146-147). In support of these comments, Hirsch cited works by colleagues and myself (Sticht & James, 1984; Sticht, et al., 1974), both of which addressed the “reading potential” concept as discussed above and the predictive relationships between listening and reading comprehension at different ages and grades of schooling.

The “Reading Potential” Concept in the Common Core State Standards (CCSS)

In Appendix A for the CCSS for English language arts and literacy the “Reading Potential” and predictive relationships among listening and reading comprehension concepts are implicitly stated in the discussion of the relationships of oral language to written language: Quote: “Oral language development precedes and is the foundation for written language development; in other words, oral language is primary and written language builds on it. Children’s oral language competence is strongly predictive of their facility in learning to read and write: listening and speaking vocabulary and even mastery of syntax set boundaries as to what children can read and understand no matter how well they can decode …. early language advantage persists and manifests itself in higher levels of literacy. A meta-analysis by Sticht and James (1984) indicates that the importance of oral language extends well beyond the earliest grades. …Sticht and James found evidence strongly suggesting that children’s listening comprehension outpaces reading comprehension until the middle school years (grades 6–8).” End quote

The Oracy to Literacy Transfer Effect in Improving Reading Comprehension

In the CCSS, to increase children’s “reading potential” teachers are advised to raise children’s conceptual knowledge and vocabulary through talking and listening, i.e. the “oracy skills” as a means of increasing the children’s “literacy skills” following the acquisition of decoding skills. To promote this “oracy to literacy” transfer, Appendix A of the CCSS states: Quote: “Because, as indicated above, children’s listening
comprehension likely outpaces reading comprehension until the middle school years, it is particularly important that students in the earliest grades build knowledge through being read to as well as through reading, with the balance gradually shifting to reading independently.” End quote

From the Vienna Rathous in 1974 to the CCSS in 2015 the idea that listening comprehension precedes reading comprehension and establishes an initial “reading potential” for the latter is a well-established understanding in children’s early education. Additional research indicates that the “reading potential” concept may also be usefully applied in the assessment and instruction of adult literacy learners (Sticht, 1979).

**Oracy: The Bridge to Literacy From Parents to Their Progeny**

The use of oracy to promote interest in and the achievement of literacy has a long history. Writing in 1908, Edmund Burke Huey made the point that “meaning inheres in this spoken language and belongs but secondarily to the printed symbols.” He also commented on the importance of parents reading to their children, saying “The secret of it all lies in the parent’s reading aloud to and with the child".

The latter was an idea which Cora Wilson Stewart, the founder in 1911 of the famous Moonlight Schools of Kentucky for illiterate adults, drew upon in writing her 1930 Mother’s First Book: A First Reader for Home Women. She knew the importance of children having literate parents, and

Cora Wilson Stewart
especially literate mothers, who could read to them. In her book for mothers, she was direct in her guidance regarding the use of oracy, stating to tutors that “The first reading lesson should be made interesting by conversation, in which the pupil is led by the teacher’s questions and suggestions to speak the sentence before she sees it in print. Then when it is presented, the teacher may say, “Here are the words in print that you have just spoken—see my baby.” The sentence then comes to the pupil with new interest.” Later, this technique of teaching literacy by first using oracy came to be known as the “language experience” approach.

A third major figure in the field of literacy instruction, and one who like Cora Wilson Stewart focused upon the use of oracy in adult literacy instruction, was Paulo Freire, the great Brazilian educationist and philosopher. In describing what became known world-wide as the Pedagogy of the Oppressed, the title of Freire’s most famous book, Paulo Freire described his techniques of using “culture circles” to promote interest in learning literacy.

In his “culture circles”, Freire first had adult learners study pictures depicting various scenes and discuss what in the scene was made by nature and what was made by humans. His aim was to get the learners to come to realize through their discussion (oracy) the difference between what nature produced and what humans (culture) produced. The purpose of this was to get the adults to come to realize that the oppressive conditions under which they lived were not the result of nature but of human culture, and that culture could be changed by their actions. Then literacy, as a cultural tool to be used in changing the conditions of their lives, was taught using emotional words taken from the oracy discussions.

Like Stewart and Freire, Huey recognized that in many cases parents might not be literate enough to help their children learn to read and write at home before they began their formal schooling. For these parents, he recommended therefore that the school “will have as one of its important duties the
instruction of parents in the means of assisting the child’s natural learning in the home.”

Today, tens of thousands of undereducated adults who are or are about to become parents are being assisted to develop their own literacy skills and those of their children in family literacy programs that work with both children and adults. These programs are more and more emphasizing the importance of the oracy skills, both for adults and their children. Data from over thirty years of national assessments of reading in the United States repeatedly show that as their parent’s years of education increases, the literacy skills of their children increase. Better educated adults have better educated children.

Additional research has indicated that much of this intergenerational transfer of literacy is due to the parent’s use of oracy. In general, better educated parents, especially mothers, expose their children to greater amounts of oral language in their early lives. Thus the more likely the child is to acquire a large oral vocabulary and a large amount of conceptual knowledge expressible and comprehensible by oracy. In turn, this provides the children with the foundation for achieving higher levels of literacy once they enter school.
The professional wisdom of Huey, Stewart, and Freire in emphasizing the importance of oracy in the development of literacy has found support in a large body of scientific research. It would seem prudent, therefore, to focus a greater amount of resources on understanding how to bring about greater levels of oracy among adults. It appears that to a large extent, oracy is the bridge to literacy from parents to their progeny.

**New Report Confirms a Hundred Years of Professional Wisdom About Parent’s Role in Developing Children’s Literacy Skills**

A hundred years ago, Edmund Burke Huey published his classic work, The Psychology and Pedagogy of Reading (1908) (reprinted by the MIT Press in 1968). In his book Huey passed on professional wisdom about reading and the teaching of reading of his day.

Now, a century later, an extensive study of early childhood literacy development has been published (U. S. Government, 2008) and its findings are remarkably reminiscent of Huey’s ideas of 1908. To illustrate this similarity, following are some extracts of paragraphs from some of Huey’s book chapters along with the results from the Developing Early Literacy (DEL) report.

Huey: Chapter VI. The Inner Speech of Reading And the Mental and Physical Characteristics of Speech. “The child comes to his first reader with his habits of spoken language fairly well formed, and these habits grow more deeply set with every year. His meanings inhere in this spoken language and belong but secondarily to the printed symbols. To read is, in effect, to translate writing into speech." (Huey, 1908/1968, pp. 122-123).

Here Huey makes the point that in learning to read the child learns to decode written language into his or her prior oral language. This means, of course, that children with higher
levels of oral language will become the better readers when they learn to decode the written language back into their spoken language.

DEL study: Following a study in which the DEL looked at how well various measures of literacy (e.g., alphabet knowledge, etc. and measures of oral language, including oral vocabulary and listening comprehension) predicted reading achievement when children entered school, the authors concluded that along with other variables, “…more complex aspects of oral language, such as grammar, definitional vocabulary, and listening comprehension, had more substantial predictive relations with later conventional literacy skills” (p. 79). In these analyses, listening comprehension of preschool children tended to correlate mildly with their reading comprehension in kindergarten, first grade, or second grade.
Importantly, however, the authors seemed to overlook the relationship to be expected between listening and reading comprehension as children enter school and progress up the grades. In a discussion of factors that can influence the size of correlations, the authors say, “Another factor that can affect the size of the correlation is the length of time from the assessment of the predictor to the measurement of the dependent variable. Correlations would presumably be lower, on average, with longer intervals of time in between assessments” (p. 58).

But this type of pre-school assessment and predictor of later reading ability is not appropriate when it comes to understanding how reading maps back onto listening comprehension as children go through the K-12 system. What is expected is that in the early grades the correlation of reading with listening comprehension will be low in the early grades because there is not much variation in children’s ability to comprehend the written language. As their skill increases with additional practice in the school grades, the correlations of listening and reading should increase as those with high listening skills before school become the better readers, while those with low preschool listening skills once again gain access back to their relatively low listening skills. This has in fact been substantiated by considerable research (Sticht, 2008).

Despite the DEL studies misrepresentation of the relationships among listening and reading comprehension, the study nonetheless confirms Huey’s early statement about the relationship of oral and written language. It also bears on another bit of Huey’s professional wisdom.

Huey: Chapter XVI. Learning to Read at Home. "The secret of it all lies in the parent's reading aloud to and with the child. The ear and not the eye is the nearest gateway to the child-soul, if not indeed to the man-soul. Oral work is certain to displace much of the present written work in the school of the future, at least in the earlier years; and at home there is
scarcely a more commendable and useful practice than that of reading much of good things aloud to the children" (p. 332 & 334).

DEL: After examining research on parents and teachers reading with children, the authors of Developing Early Literacy conclude: “Despite any analytical limitations, these studies indicate that shared-reading interventions provide early childhood educators and parents with a useful method for successfully stimulating the development of young children’s oral language skills” (p. 163).

“Overall, the evidence supports the positive impact of shared-reading interventions that are more intensive in frequency and interactive in style on the oral language and print knowledge skills of young children” (pp. 163-164). “It seems reasonable to proceed with the idea that shared reading would help all or most subgroups of children, given the inclusion in these studies of mixed samples of children from different socioeconomic backgrounds, different ethnicities, and different living circumstances” (p.164).

Again, a hundred years later, the wisdom of educators of the 19th and early 20th centuries is confirmed in the 21st century! And there is more confirmation of this wisdom.

Huey: Chapter XV. The Views of Representative Educators Concerning Early Reading. "Where children have good homes, reading will thus be learned independently of school. Where parents have not the time or intelligence to assist in this way the school of the future will have as one of its important duties the instruction of parents in the means of assisting the child's natural learning in the home" (pp. 311-312).
DEL: The DEL researchers evaluated research in which “the instruction of parents in the means of assisting the child’s natural learning in the home” took place, as suggested by Huey. They reported, “Some educators consider parent education an integral component of early childhood programs; however, reports of their effectiveness have varied widely. Many of the studies reviewed in this chapter were initiated with the assumption that successful PI [parental involvement] programs help parents understand the importance of their role as first teachers and equip them with both the skills and the strategies to foster their children’s language and literacy development” (p. 173). Following their research review, the DEL authors concluded, “Overall, the results…indicate that home and parent intervention programs included in these studies had a statistically significant and positive impact both on young children’s oral language skills and general cognitive abilities” (p. 174).

Now, over a hundred years since Huey made his observations about oral language and early childhood literacy education in the home, the Developing Early Literacy (DEL) report has provided an extensive review of hundreds of research studies that place a scientific veneer on the solid professional wisdom of literacy educators.

What is needed now is the will to provide the extensive adult education that will permit parents to develop their children’s oral language skills which provide the foundation for skilled reading comprehension.

**Mind the 30 Million Word Gap!**

[“Things are going to slide, slide in all directions. Won’t be nothing, Nothing you can measure anymore”. –[From the song “The Future” by Leonard Cohen, Canadian Poet, Musician, Singer]

Americans love measurement. Sometimes, even when common sense reveals the obvious truth of a proposition, it will be ignored until some form of objective measurement is
forthcoming to support the truth of the thought expressed. Today, there is underway in the United States a large initiative aimed at closing the gap between the reading achievement of children from poorer homes and those from affluent homes. Called the “30 million word gap”, the initiative builds on the appearance of measurements based on the common sense observation that reading ability is formed on children’s earlier developed oral language ability.

An early expression of the common sense idea that reading ability is based on the earlier acquired ability to listen to and speak the native oral language is found in 1908 in Edmund Burke Huey’s classic book, “The Psychology and Pedagogy of Reading.” In this book Huey wrote about the relationship of oral to written language and said, “The child comes to his first reader with his habits of spoken language fairly well formed, and these habits grow more deeply set with every year. His meanings inhere in this spoken language and belong but secondarily to the printed symbol.”

Jumping ahead a few decades, colleagues and I surveyed large numbers of studies that measured relationships among children’s and adult’s listening and reading skills (Sticht, et al., 1974; Sticht & James, 1984). In this research we found that in the early grades of school children comprehended better by listening to rather than by reading of materials. But as they progressed through school their listening and reading abilities improved and the gap between their listening and their reading ability closed until by around the 6th to 8th grade levels they were able to comprehend equally well what they listened to or read.

A decade later another major research project, which measured the relationships of oral language ability to written language achievement, lead directly to the present “30 million word gap” initiatives. Betty Hart and Todd Risley (1995) reported their research tracking the acquisition of oral vocabulary of 42 children in the homes of welfare, working class, and professional families for two and a half years. They estimated that from birth to 4 years of age welfare children would experience some 15 million words, working class children around 30 million words, and children of
professional parents would experience some 45 million words. These differences in words listened to lead to differences in oral vocabulary of the children in these three groups and in turn these differences were carried over into the school years resulting in similar differences in reading achievement among these three groups.

In the Hart & Risley study, the difference between the number of words heard by the children of the welfare and the professional groups (45-15=30 million) formed the basis for the current “30 million word gap” initiatives. In a June 25, 2014 White House Blog, Maya Shankar, Senior Advisor for the Social and Behavioral Sciences at the White House Office of Science and Technology Policy said:

“Research shows that during the first years of life, a poor child hears roughly 30 million fewer total words than her more affluent peers. This is what we call the “word gap,” and it can lead to disparities not just in vocabulary size, but also in school readiness, long-term educational and health outcomes, earnings, and family stability even decades later. That’s why today we are releasing a new video message from President Obama focused on the importance of supporting learning in our youngest children to help bridge the word gap and improve their chances for later success in school and in life.”

Perhaps this new emphasis upon educating parents to develop their children’s oral language skills will help children achieve higher education and overcome the scourge of poverty in later life. As our British cousins might say, “Mind the 30 Million Word Gap”!

Black-White Differences in Oracy and Literacy: A Needed Conversation

The New York Times online published an article by Trip Gabriel on November 9, 2010 entitled: “Proficiency of Black Students Is Found to Be Far Lower Than Expected.” The article refers to research by the Council of the Great City Schools that indicates that: “Only 12 percent of black fourth-
grade boys are proficient in reading, compared with 38 percent of white boys. and only 12 percent of black eighth-grade boys are proficient in math, compared with 44 percent of white boys. Poverty alone does not seem to explain the differences: poor white boys do just as well as African-American boys who do not live in poverty, measured by whether they qualify for subsidized school lunches.”

Ronald Ferguson, director of the Achievement Gap Initiative at Harvard, commented on these findings and said: “There’s accumulating evidence that there are racial differences in what kids experience before the first day of kindergarten. They have to do with a lot of sociological and historical forces. In order to address those, we have to be able to have conversations that people are unwilling to have.”

According to Dr. Ferguson, these conversations include “conversations about early childhood parenting practices. The activities that parents conduct with their 2-, 3- and 4-year-olds. How much we talk to them, the ways we talk to them, the ways we enforce discipline, the ways we encourage them to think and develop a sense of autonomy.”

Listening to adults speak in early childhood may, as suggested by Ferguson, produce differences in both oracy (listening to and comprehending speech) and literacy (reading). In unpublished research for the U. S. Department of Defense, colleagues and I found that there were significant differences between black and white young adults who were applicants for military service in the oracy skills involved in listening to and recalling information from spoken messages.
When listening to and recalling information from a 5th grade passage spoken at 100 words per minute, whites answered correctly 95 percent of questions while blacks answered 85 percent correctly, a ten point gap.

Surprisingly, however, when the spoken message was presented for listening at 250 words per minute, which is about the average rate for silent reading by college-oriented, high school graduates, whites got 60 percent correct while blacks got only 30 percent correct, a 30 point gap. For some reason, accelerating the rate of speech tripled the gap between recall scores for whites and blacks when the rate of speech of the spoken message was increased from 100 to 250 words per minute.

The differences among black and white children in literacy persist into adulthood. The 1992 National Adult Literacy Survey (NALS) asked adults to rate their own reading skills as they perceived them. In a report on the Literacy of Older Adults in America, from the National Center for Education Statistics in Washington, DC, November 1996, the authors reported (p. 43) black/white differences in self-ratings of their reading skills:

Whites: Very Well-77%, Well-21%, or Not Well/Not AtAll-3%.
Blacks: Very Well-67%, Well-27% and Not Well/Not AtAll-6%.

Among both blacks and whites, poor reading appears to be a perceived problem for only 3 to 6 percent of these populations, about 4.5 million adults in the age range 16-59.

Importantly however, when the average proficiencies of whites and blacks on the NALS Prose scale were compared, it was found that for whites who rated themselves as reading Very Well, their average Prose proficiency was 308, well above average, whereas for blacks rating themselves as reading Very Well, their Prose average proficiency was 259, well below average.
The NALS data include both males and females, whereas the Council of the Great City Schools and the military data refer to males. Still, the NALS data indicate an important difference in blacks and whites, and that is that even though both groups overwhelmingly perceive themselves as reading Very Well or Well, there is a large gap, greater than one standard deviation, between Whites and Blacks in their measured reading abilities.

There are other important differences in the oracy and literacy skills of black and white children and adults that beg for better understanding, including the disturbing fact that the black-white differences in oracy and literacy appear to be transmitted intergenerationally from parents to their children. Unfortunately, as Ferguson stated, it appears that achieving such understanding requires “conversations that people are unwilling to have.”

The Plight of Those With Oracy Difficulties in America

In our focus upon teaching native English speaking children and undereducated adults the literacy skills of reading and writing, we take little notice that our teaching and our student’s learning take place largely through the oracy skills of speaking and listening. Like water for fish and air for people, so embedded is our instruction of literacy within the environment of oracy that the latter is barely, if at all, noticed.

In a 2009 report entitled Speak Up and Listen, Terry Roberts and Laura Billings of the Paideia Center at the University of North Carolina call attention to the importance of oracy skills. They point to the relative lack of instruction of teachers about oracy skills, and the lack of emphasis upon the instruction of oracy skills with students at any educational level:

“…unfortunately, too many educators fail to see the importance of teaching basic communication skills—speaking and listening—on anything like a consistent basis. The single-minded focus on standardized testing that has
infiltrated almost every corner of American public education has pushed out everything that is not tested, including those skills that are at the very heart of learning to learn and learning to think. It is all the more ironic, then, that speaking and listening are 21st Century survival skills—both for their own sake and as a medium for critical thinking. …conversation is directly connected to critical thinking in general and problem solving in particular. This is also how we learn complex subjects, including the conceptual part of any standardized curriculum. In order to think clearly about math or science, history or poetry, we need consistent practice in talking about those subjects and in hearing others talk about them.

In 2004, speaking in less academic language, Bill Cosby, world famous comedian and television star, and holder of a GED high school equivalency degree, spoke at the National Association for the Advancement of Colored People (NAACP). His speech was about the sorry state of educational achievement among many African-Americans. He was caustic in his comments about the poor Standard English language skills of a number of African-Americans and how this holds them back. He said:

"We’ve got to take the neighborhood back. We’ve got to go in there. Just forget telling your child to go to the Peace Corps. It’s right around the corner. It’s standing on the corner. It can’t speak English. It doesn’t want to speak English. I can’t even talk the way these people talk: “Why you ain’t where you is go ra?” I don’t know who these people are. And I blamed the kid until I heard the mother talk. Then I heard the father talk.

This is all in the house. You used to talk a certain way on the corner and you got into the house and switched to English. Everybody knows it’s important to speak English except these knuckleheads. You can’t land a plane with, “Why you ain’t...” You can’t be a doctor with that kind of crap coming out of your mouth.”
A report of a 2009 survey of employees (the actual workforce, not employers) entitled American Workers and Employers Agree: New Entry-Level Workers Are Not Prepared for the 21st-Century Workplace, indicates the relative importance of oracy and literacy skills as perceived by employees. When given the choices of professionalism, communication, problem solving, working in teams, reading comprehension and math/science, employees rated the most important skill set necessary to succeed in their workplace as communication (29 percent), problem solving (27 percent), professionalism (20 percent), working in teams (11 percent), reading comprehension in English (9 percent) and math/science (5 percent).

These American workers reported that some 37 percent of new entries into work were unprepared for an entry-level job in their workplace. We can only guess about the numbers of times many employers find that they cannot hire someone because the person doesn’t seem to know how to speak to and listen to customers, employers, or others in a professional manner. Anecdotal evidence, however, like that of Bill Cosby’s, suggests that we need to pay a great deal more attention to the plight of those native English speakers with difficulties in their oracy skills.

**Oracy as a Predictor of Workforce Success**

Numerous reports by business, industry, vocational, government, and other organizations have indicated that adults’ oracy (auding and speaking) and literacy (reading and writing) skills are related to productivity on the job and hence to a nation’s productivity in the global economy. But there is little empirical evidence that directly examines the relationships of oracy skills to the actual performance of important tasks in various jobs. Here I discuss research on auding (listening comprehension of tape recorded passages) and reading skills in relation to the performance of actual job tasks in four jobs.
Auding, Reading, and Job Performance. In the most extensive research of its kind up to the present, colleagues and I examined the relationships of auding and reading skills of Army personnel in four jobs (Armor Crewman, Cook, Automotive Repairman, Supply Clerk) to measures of job performance and job knowledge.1 The hands-on, job performance measures included actual job tasks determined by job and task analysis. For instance, Cooks cooked scrambled eggs, made jelly roles, set-up field kitchens, and other tasks. Automobile mechanics repaired broken vehicles. Supply Clerks worked in a mock-up office and completed various requisition and accountability forms. Armor Crewman performed driving in response to hand-and-arm signals, preparing a tank for battle and so forth.

The job knowledge measures were multiple choice knowledge questions derived from on-the-job interviews with personnel in which they were asked what job incumbents genuinely had to know to be able to perform their jobs effectively. This information was then used to construct job knowledge, paper-and-pencil tests.

In each of the jobs some 400 personnel were examined using a test in which examinees traced a line through a paper-and-pencil maze as a measure of non-verbal reasoning, a listening test, and a reading test and these tests were correlated with performance on the job performance and knowledge tests.

For the hands-on, job task performance measures, out of a possible perfect relationship of 1.0, the correlations with the maze, auding, and reading tests were +.18, +.34, and +.33 respectively. Thus, auding was as highly correlated with hands-on job performance as was reading. But for the paper-and-pencil, job knowledge tests, the correlations for the maze, auding, and reading measures were +.20, +.42, and +.49 respectively. These data suggest that because the knowledge tests directly involved the use of reading, as did the reading test, the correlation of the reading test with the knowledge test was greater than for listening and the knowledge test. Generally this represents the fact that when two tests include more similar features they tend to correlate more highly.
In separate research, colleagues and I analyzed data from some 4500 young men who applied for military service and were administered tests of auding (comprehension of spoken paragraphs by listening) and reading (comprehension of written paragraphs) along with the Armed Forces Qualification Test (AFQT). The analyses compared auding and reading tests with the AFQT as predictors of attrition and promotions within military jobs. The data showed that oracy using the auding test of listening comprehension was the best predictor of attrition within the first 30 months of service. Years of education was the best predictor of promotions, reflecting in part the practice of the military services in using education as a factor in determining job advancement. The AFQT was the best test-based predictor of job promotion (pay grade achieved) and the auding test added significantly to the AFQT as a predictor of promotion.
Though the research reported here is over 20 years old, and I have not found more recent research of this kind, it reinforces the typical assertion that both oral communication skills, represented in this case by auding, and literacy (the AFQT is comprised of four paper-and-pencil tests completed by reading) are indicators of workforce readiness and are important for both job productivity and the nation’s global competitiveness. For this reason, educators at all levels of schooling, including adult basic education, need to focus more attention on improving the oracy skills of native English speakers along with those needing English as an additional language. Improved oracy as well as literacy skills can enhance the employability of adults and their advancement in work.

Some Misunderstandings About Reading

The federal government encourages the use of "scientific, evidence-based" methods of teaching the "essential components" of reading. For instance, the now non-existent National Institute for Literacy web page once stated: Scientific research has identified five components of reading: phonemic awareness, phonics, fluency, vocabulary, comprehension.

However, this seems to me to contain certain misunderstandings about reading which I have summarized below, along with some other misunderstandings that I have seen in the literature on reading.

Misunderstanding #1: Fluency is one of "the essential components of reading" that include alphabetics (phonemics, phonics), fluency, vocabulary, comprehension.

Correction: "fluency" is not a "component" of anything. Rather it is the quality of a performance. In reading it refers to reading that is executed without a lot of mistakes, not in a slow, halting, recursive manner but rather in a regular left to right, progressive moving, fairly rapid (around 200-250 words
per minute) manner when reading materials of some familiarity.

Misunderstanding #2: Vocabulary is one of "the essential components of reading" that include alphabetics (phonemics, phonics), fluency, vocabulary, comprehension.

Correction: Vocabulary is a component of language, not listening or reading, though it can be acquired using either of these information pick-up processes.

Misunderstanding #3: Comprehension is one of "the essential components of reading" that include alphabetics (phonemics, phonics), fluency, vocabulary, comprehension.

Correction: Comprehension precedes reading and directs the reading process, not the other way around. Listening to speech is one way to comprehend language, reading graphic symbols is another. Children typically learn to comprehend by listening to speech before they learn to comprehend by reading. Comprehension is what the reader tries to achieve, but comprehension is not a component of reading, it is both a precursor to and a result of reading.

Misunderstanding #4: Listening and reading are the same language processes.

Correction: Listening and reading are both information pick-up processes which may be used to construct language, but they are not language and they are not the same. You can do one in the dark, the other in a noisy room, but neither in a dark, noisy room. Languaging can be accomplished using signing and/or tactual information pick-up processes, too.

Misunderstanding #5: "First you learn to read, then you read to learn."

Correction: Despite the wide-spread use of this old bromide, you always read to learn. Even when learning to read, one looks at the graphic displays and tries to learn (i.e., "read") them as symbols. First you read to learn to read graphic information as symbols then you read to learn some other new information forming new ideas expressed in graphic symbols.
Misunderstanding #6: We can teach reading skills to children and adults.

Correction: We cannot teach "skills." We can teach knowledge but skill must be developed through practice. We can coach for skill, and we can model skillful performance, but we cannot teach skill. When we teach phonics we are teaching a body of knowledge about sight-sound correspondences, not decoding skill. The latter can only be developed through practice.

Establishing a "scientific, evidence-based" approach to reading instruction requires that we first have a good understanding of the phenomenon we call "reading." As far as I can see, this is still a work in progress for the field of reading.

It seems like others may be as confused as I am about just what the components of reading are. Both the U.S. Dept. of Education and National Institute For Literacy at one time or another have told us that there are five components of reading: phonemics, phonics, fluency, vocabulary, comprehension. This is one reason I was surprised by the research on the components of reading and their relationships to the International Adult Literacy Survey (IALS) scores. In that research it said that the reading components assessed included spelling, which was measured by “A list of 15 words dictated in isolation, with an exemplar sentence for each word.”

I was also surprised to find short term memory for numbers included as one of the components of reading. Short term memory is involved in all active information processing. If so, then it is involved in reading – but is it a component of reading?

Many things are related to reading, motivation, etc. This raises to me the distinction between things that are correlated and things that are made up of components. For instance, a picture puzzle is made-up of the many pieces that are components of the picture. They are not generally thought of
as correlated with the picture, but rather as part of (i.e., a component of) the picture.

It can be shown that age and reading ability are positively correlated, e.g., babies, toddlers, can’t read, children in school gradually read better and better. But I don’t think it is useful to consider age a component of reading, rather it is a correlate of reading.

It is not surprising to me that with so much confusion about what the components of reading are that people don’t always talk the same way about what we call reading nor do they all try to teach it the same way. This raises the question: What are the components of reading?

Critiquing Constructs of Intelligence and Literacy

Definitions of literacy pose problems for assessment and instruction. For instance, the Centre for Literacy in Montreal, Quebec provided the following definition of literacy:

“Literacy is a complex set of abilities needed to understand and use the dominant symbol systems of a culture – alphabets, numbers, visual icons - for personal and community development. The nature of these abilities, and the demand for them, vary from one context to another. ...In a technological society, literacy extends beyond the functional skills of reading, writing, speaking and listening to include multiple literacies such as visual, media and information literacy. These new literacies focus on an individual’s capacity to use and make critical judgments about the information they encounter on a daily basis.”

In contrast, the International Adult Literacy Survey (IALS), the Adult Literacy and Lifeskills (ALL) survey, the National Adult Literacy Survey (NALS), the National Assessment of Adult Literacy (NAAL), and the Programme for the International Assessment of Adult Competencies (PIAAC) all defined literacy as: Using printed and written information to function in society, to achieve one’s goals, and to develop one’s knowledge and potential. These surveys go on to define:
Prose literacy as the knowledge and skills needed to perform prose tasks (i.e., to search, comprehend, and use information from continuous texts); and Document literacy as the knowledge and skills needed to perform document tasks (i.e., to search, comprehend, and use information from non-continuous texts in various formats).

The adult literacy surveys focus on the performance of tasks that go from simple to more complex resulting in a scale of difficulty from easier to more difficult. The survey test development methodology is based on a theory about the components of literacy task performance that makes the tasks increase in difficulty. This set of components was validated by including them in multiple regression formulas for predicting performance on the survey tests using a response probability (RP) for getting the task correct of .80 as their criterion. But additional research showed that if the RP was dropped to .50 or below, then the components predicting difficulty changed. For instance, when predicting performance using the .80 RP a readability formula was not a useful component for predicting test performance. But when the .50 RP was used, the readability formula was a significant predictor of performance. This change resulted just by changing the RP standard, with no specified change in the theory of literacy purporting to underpin literacy task performance. This raises the question of just what it is that the tests are assessing.

Somewhat surprisingly, despite the fact that the definitions of both prose and document scales define them as the knowledge and skills needed to perform the literacy tasks, none of the adult literacy surveys actually assess and report on knowledge. This is troubling because psychometric research on intelligence over the last half century has resulted in a trend to draw a distinction between the knowledge aspect and the processing skills aspects of intelligence. Beginning in the 1940s and continuing up to the 1990s, the British psychologist, Raymond B. Cattell and various collaborators, and later many independent investigators, made the distinction between "fluid intelligence" and "crystallized intelligence." Cattell (1983) states, "Fluid intelligence is
involved in tests that have very little cultural content, whereas crystallized intelligence loads abilities that have obviously been acquired, such as verbal and numerical ability, mechanical aptitude, social skills, and so on. The age curve of these two abilities is quite different. They both increase up to the age of about 15 or 16, and slightly thereafter, to the early 20s perhaps. But thereafter fluid intelligence steadily declines whereas crystallized intelligence stays high" (p. 23).

Cognitive psychologists have re-framed the "fluid" and "crystallized" aspects of cognition into a model of a human cognitive system made-up of a long term memory which constitutes a knowledge base ("crystallized intelligence") for the person, a working memory which engages various processes ("fluid intelligence") that are going on at a given time using information picked-up from both the long term memory's knowledge base and a sensory system that picks-up information from the external world that the person is in. Today, over thirty years of research has validated the usefulness of this simple three-part model (long term memory, working memory, sensory system) as a heuristic tool for thinking about human cognition (Healy & McNamara, 1996).

The model is important because it helps to develop a theory of literacy as information processing skills (reading as decoding printed to spoken language) and comprehension (using the knowledge base to create meaning) that can inform the development of new knowledge-based assessment tools and new approaches to adult education.

All the adult literacy surveys listed above used "real world" tasks to assess literacy ability across the life span from 16 to 65 and beyond. Such test items are complex information processing tasks that engage unknown mixtures of knowledge and processes. For this reason it is not clear what they assess or what their instructional implications are (Venezky, 1992, p.4).

Sticht, Hofstetter, & Hofstetter (1996) used the simple model of the human cognitive system given above to analyze
performance on the NALS. It was concluded that the NALS places large demands on working memory processes ("fluid intelligence"). The decline in fluid intelligence is what may account for some of the large declines in performance by older adults on the NALS and similar tests. To test this hypothesis, an assessment of knowledge ("crystallized intelligence") was developed and used to assess adult's cultural knowledge of vocabulary, authors, magazines and famous people. The knowledge test was administered by telephone and each item was separate and required only a "yes" or "no" answer, keeping the load on working memory ("fluid intelligence") very low.

Both the telephone-based knowledge test scores and NALS door-to-door survey test scores were transformed to standard scores with a mean of 100 and a standard deviation of 15. The results showed clearly that younger adults did better on the NALS with its heavy emphasis on working memory processes ("fluid literacy") and older adults did better than younger adults on the knowledge base ("crystallized literacy") assessment that was given by telephone.

Consistent with the foregoing theorizing and empirical demonstration, Tamassia, Lennon, Yamamoto, & Kirsch (2007) report data from a survey of the literacy skills of adults in the Adult Education and Literacy System (AELS) of the United States. Once again they found that performance on the literacy tasks declined with increased age, that is, the higher the age of the adults, the lower their test scores became. They state that, "the negative relationship between age and performance is consistent with findings from previous studies of adults (i.e., IALS, ALL, and NAAL; NCES 2005; OECD and Statistics Canada 2000, 2005)." They go on to say, "Explanations of these previous findings have included (a) the effects of aging on the cognitive performance of older adults, (b) younger adults having received more recent and extended schooling, and (c) the finding that fluid intelligence may decrease with age causing older adults to have more difficulties in dealing with complex" (p. 107).
Strucker, Yamamoto, & Kirsch (2005) assessed short term, working memory for a sample of adults who also completed Prose and Document literacy tasks from the IALS. They found a positive relationship between performance on the working memory task and the literacy tasks, showing that adults with better short term memories performed better on the IALS. Again, this is consistent with the idea that the literacy tasks involve a complex set of skills and knowledge, including the capacity to manage information well in working memory or "fluid literacy."

Given the differences between younger and older adults on "fluid literacy" and "crystallized literacy" there is reason to question the validity of using "real world" tasks like those on the Prose, Document and Quantitative scales of the IALS, ALL, NALS, and NAAL to represent the literacy abilities of adults across the life span. In general, when assessing the literacy of adults, it seems wise to keep in mind the differences between short term, working memory or "fluid" aspects of literacy, such as fluency in reading with its emphasis upon efficiency of processing, and the "crystallized" or long term memory, knowledge aspects of reading.

It is also important to keep in mind these differences between fluid and crystallized literacy in teaching and learning. While it is possible to teach knowledge, such as vocabulary, facts, principles, concepts, and rules (e.g., Marzano, 2004), it is not possible to directly teach fluid processing. Fluidity of information processing, such as fluency in reading, cannot be directly taught. Rather, it must be developed through extensive, practice. Though I know of no research on this theoretical framework regarding the differences between fluid and crystallized literacy and instructional practices in adult literacy programs, it can be hypothesized that all learners are likely to make much faster improvements in crystallized literacy than in fluid literacy, and this should be especially true for older learners, say those over 45 to 50 years of age.
The "Skills" Versus "Knowledge" Debate and Adult Literacy Education

The decades old debate about "phonics" [synthetic, decoding emphasis] versus "whole language" [analytic, meaning emphasis] still rages in education circles. Now this debate appears to be being joined by another debate, "skills" versus "knowledge".

On the "skills" side of the debate, the BBC News education service reported on April 11, 2006 that the Association of Teachers and Lecturers (ATL) said: "The national curriculum should be fundamentally reformed with more focus on skills than specific subjects." The Association "wants ministers to give children "entitlements" to broad skills, such as creativity and physical co-ordination, rather than specific knowledge." The ATL general secretary Mary Bousted reportedly said at a conference, "skills" were needed, rather than knowledge on its own. Subjects could be used to "illustrate" them.

On the "knowledge" side of the debate I found itironically amusing that the day before the BBC news article appeared, I received my copy of The American Educator, a magazine published by the American Federation of Teachers. The Spring 2006 issue presents a lengthy series of articles and sidebars arguing against the position taken by the U.K teachers association and stating that in the U. S. schools there needs to be less of a focus on broad general skills and a much larger focus on subject matter knowledge.

The American Educator Spring issue lead in was an article by E. D. Hirsch Jr, a major commentator on education the U. S. The old adage: "You’ve got to know something to learn something" provides a succinct summary of the gist of E. D. Hirsch Jr’s article. In his article, and a recent book (Hirsch, 2006) he presents an extensive review of research that demonstrates that approaches to the teaching of reading with underachieving students that focus on "skills" or "strategies’ while largely ignoring the importance of content knowledge are likely to produce students with good decoding skills, but with poor comprehension ability. The reason is that for the
most part students who lack vocabulary and comprehension of various bodies of knowledge when these are assessed by listening before the students start school, are the ones most likely to have poor comprehension skills after they learn to decode the written language. This is extensively documented in Sticht et al. (1974) which Hirsch cites in his new book to support his argument for the importance of content knowledge in reading comprehension.

Knowledge Development in Adult Literacy Education

While the "skills" versus "knowledge" debate addressed above aims at children’s education, the role of knowledge in reading is even more important for adult literacy education, where the time for developing "broad general skills" is typically very limited. The role of relevant background knowledge for adult literacy education was illustrated in research colleagues and I did to develop a 45 hour reading program for the U. S. Navy. In this work special readability formulas were developed to determine how much general reading ability, as measured by a standardized reading test, was needed to comprehend written materials about the Navy with 70 percent accuracy. We found that as background knowledge about the Navy increased from very little to a lot, the general reading ability needed to comprehend with 70 percent accuracy fell from the 11th grade to the 6th grade. In this case, high knowledge relative to what was being read was as effective as 5 grade levels of general reading ability in influencing reading comprehension.

In additional work for the Navy, we applied the findings of the importance of relevant background knowledge and developed a 45 hour reading program that used navy related content in which to embed reading skills instruction. We then compared a general reading program the Navy had which used a variety of general reading materials to the Navy-related program that used Navy-related materials. We developed and administered a Navy Knowledge test, in which students read and answered questions dealing with Navy-related knowledge but with no passages to read on the test. We also administered a reading test in which students answered questions by
reading paragraphs about the Navy with the information they needed to correctly answer the questions. Additionally, a standardized reading test that provided grade level scores in general reading was administered to all students.

When compared to the general reading program that used general, civilian school-related materials, the Navy-related program made greater improvements in both Navy-related knowledge and Navy-related functional reading than did the conventional, non-job-related program. The lowest reading ability personnel (6th grade or below) in the Navy job-related program also made considerable improvements in general reading. The general reading program made more improvement on the general reading test for personnel across the reading skills spectrum, but that skill did not transfer to the performance of the Navy-related material, which is the material that the Navy personnel had to read for job advancement.

For adults in basic skills programs who generally have little time to devote to improving their reading, it is important to develop their reading skills using as the vehicle for instruction the content knowledge in which they are most immediately in need. Developing a fair amount of knowledge in some specific area, such as health knowledge, computer knowledge, consumer knowledge, job knowledge, etc., can often be done in a relatively brief period of time when the instruction is well focused on the content to be taught. With continued practice in reading in a wide range of materials, adults can develop into more generally knowledgeable and skilled literate adults.

Confusing Ignorance With Illiteracy

One of the major purposes of having people learn to read is so that they may be able to increase their knowledge about a subject. For instance, if you want to find out what someone knows about a subject, you might give them a simple multiple choice test in a written format, and then ask questions about the subject matter of interest. But this confounds the
assessment of the person's knowledge about the subject with their ability to read.

Often in what are called reading tests, knowledge and reading skill are confounded. For instance, in a vocabulary test, it may be unclear whether a person does not know the meaning of a word, or the person lacks the word recognition skill to decode the word.

In the National Assessments of Educational Progress (NAEP), reading skills and knowledge assessment are confounded in tests of science, mathematics, or other content areas because the latter assessments are given largely using the printed language and require good reading skills which some students may not have. Generally there is no attempt to separately determine a student's knowledge in the content area separately from the person's ability to read in the content area in an unskilled or skilled manner.

In work for the U.S. Navy, colleagues and I developed a 45 hour reading development program to help sailors improve their reading ability while increasing their knowledge needed for upward mobility in their career progression. In this program, reading instruction was integrated with Navy career progression knowledge. In assessing learning outcomes in this course we considered both improvements in Navy career progression knowledge and increases in reading skill. We did this by developing two separate assessments.

The Navy Knowledge assessment presented questions about the career progression information taught in the course and required the personnel to answer the questions drawing upon the knowledge they had in their long term memories. The Navy Functional Reading assessment presented questions for answering, along with paragraphs of written information that contained the answers to the questions. The idea here was to find out how well the personnel could read the written language to increment whatever internal knowledge they had in long term memory stored in their brains, by extracting it from the external "long term memory" formed by the written passages. By comparing the Navy Knowledge and Navy
Functional Reading assessment results in pre-and post-program assessments we could determine separately the extent to which personnel had increased their Navy knowledge as well as their reading skill for incrementing their long term knowledge store using an external knowledge store.

In additional work for the U.S. Navy we developed separate readability formula for determining how much general reading ability as measured by a standardized, normed reading test a person needed to be able to comprehend Navy material with 70% accuracy. We developed formulas for four groups with high to low prior knowledge about the Navy. We found that with low background Navy knowledge a person needed a general reading ability of about the eleventh grade to comprehend with 70 percent accuracy. But highly knowledgeable personnel needed only a sixth grade level of general reading to comprehend Navy-related material with 70 percent accuracy. In this case, then, high levels of background knowledge substituted for some five grade levels of general reading ability.

The Armed Services have long understood the difference between general reading ability and specialized bodies of knowledge in developing their Armed Services Vocational
Aptitude Battery (ASVAB). This assessment battery assesses both general reading vocabulary and paragraph comprehension, but also includes assessments of specialized bodies of knowledge such as Auto and Shop, General Science, Electricity and Electronics, and others. When selecting people for service, lower general reading ability scores may be offset by higher scores in specialized bodies of knowledge.

The failure to attend to differences in knowledge and literacy is a problem for the National Assessments of Educational Progress and the National Assessment of Adult Literacy. It contributes to a serious underestimation of the intellectual abilities of America's children, youth, and adults, and it leads to the egregious error of confusing ignorance with illiteracy.

**Theoretically You Can’t Teach Adults to Read and Write: But Just Keep On Doing It**

Why is it so hard to get funding for adult literacy education? Innumerable studies, reports, TV shows, and statistical surveys in most of the industrialized nations of the world declare that their nation is being brought to its economic knees because of widespread low basic skills (literacy, numeracy) amongst the adult population. But repeated calls for funding commensurate with the size of the problem go unanswered. Why?

Beneath the popular pronouncements of educators, industry leaders, and government officials about the importance of adult basic skills development there flows an undercurrent of disbelief about the abilities of illiterates or the poorly literate to ever improve much above their present learning.

This was encountered close to a hundred years ago when Cora Wilson Stewart started the Moonlight Schools of Kentucky in 1911. Her claim that adults could learn to read and write met with skepticism. As she reported, "Some educators, however, declared preposterous the claims we made that grown people were learning to read and write. It was contrary to the principles of psychology, they said."
Today that undercurrent of disbelief still flows, but today it carries with it the flotsam and jetsam of "scientific facts" from genetics science, brain science, and psychological science. Look here at objects snatched from the undercurrent of disbelief stretching back for just a decade and a half.

2006. Ann Coulter is a major voice in the conservative political arena. In her new book, *Godless: The Church of Liberalism* (Chapter 7 The Left’s War on Science: Burning Books to Advance "Science" pages 172-174) she clearly defends the ideas given in Murray & Herrnstein’s book *The Bell Curve* regarding the genetic basis of intelligence. By extension, since *The Bell Curve* uses reading and math tests in the Armed Forces Qualification Test (AFQT), Coulter is discussing the genetic basis of literacy and numeracy.

In her book she says about *The Bell Curve* book: "Contrary to the party line denying that such a thing as IQ existed, the book methodically demonstrated that IQ exists, it is easily measured, it is heritable, and it is extremely important. …Among many other things, IQ is a better predictor than socioeconomic status of poverty, unemployment, criminality, divorce, single motherhood, workplace injuries, and high school dropout rates. …Although other factors influence IQ, such as a good environment and nutrition, The Bell Curve authors estimated that IQ was about 40 to 80 percent genetic." (p. 173)

Coulter goes on to discuss the misuse of science in the same chapter in relation to AIDS and homosexuality, feminism, trial-lawyers law suits, DDT and environmentalists, abortion and stem cell research, and other topics that are controversial among large segments of the population but of mainstream concern in the far right conservative base in the United States.

Because of her position as a best-selling author and spokesperson for conservative groups, Ann Coulter’s ideas about the genetic basis of intelligence and high school dropouts can have a profound impact upon political thinking about basic skills education among adults who have not achieved well.

2005. The Nobel Prize winning economist James J. Heckman in an interview at the Federal Reserve Bank region in Chicago
discussed his ideas about cognitive skills and their malleability in later life with members of a presidential commission consisting of former U.S. senators, heads of federal agencies, tax attorneys and academic economists. Later in his interview he discusses what Adam Smith, in his *The Wealth of Nations* said and why he, Heckman, disagrees with Smith.

According to Heckman, Adam Smith said, "... people are basically born the same and at age 8 one can't really see much difference among them. But then starting at age 8, 9, 10, they pursue different fields, they specialize and they diverge. In his mind, the butcher and the lawyer and the journalist and the professor and the mechanic, all are basically the same person at age 8."

Heckman disagrees with this and says: "This is wrong. IQ is basically formed by age 8, and there are huge differences in IQ among people. Smith was right that people specialize after 8, but they started specializing before 8. On the early formation of human skill, I think Smith was wrong, although he was right about many other things. ... I think these observations on human skill formation are exactly why the job training programs aren't working in the United States and why many remediation programs directed toward disadvantaged young adults are so ineffective. And that's why the distinction between cognitive and noncognitive skill is so important, because a lot of the problem with children from disadvantaged homes is their values, attitudes and motivations....Cognitive skills such as IQ can't really be changed much after ages 8 to 10. But with noncognitive skills there's much more malleability. That's the point I was making earlier when talking about the prefrontal cortex. It remains fluid and adaptable until the early 20s. That's why adolescent mentoring programs are as effective as they are. Take a 13-year-old. You're not going to raise the IQ of a 13-year-old, but you can talk the 13-year-old out of dropping out of school. Up to a point you can provide surrogate parenting."

Here Heckman seems to think of the IQ as something relatively fixed at an early age and not likely to be changed later in life. But if IQ is measured in *The Bell Curve*, a book
in which Heckman found some merit, using the AFQT, which in turn is a literacy and numeracy test, then this would imply that Heckman thinks the latter may not be very malleable in later life. This seems consistent with his belief that remediation programs for adults are ineffective and do not make very wise investments.

2000. It is easy to slip from talking about adults with low literacy ability to talking about adults with low intelligence. On October 2, 2000, Dan Seligman, columnist at Forbes magazine, wrote about the findings of the National Adult Literacy Survey (NALS) of 1993 and said, "But note that what’s being measured here is not what you’ve been thinking all your life as "literacy." The cluster of abilities being examined is obviously a proxy for plain old "intelligence." He then goes on to argue that government programs won’t do much about this problem of low intelligence, and, by extension, of low literacy.

These types of popular press articles can stymie funding for adult literacy education. That is one reason why it is critical that when national assessments of cognitive skills, including literacy, are administered, we need to be certain about just what it is we are measuring. Unfortunately, that is not the case with the 1993 NALS or the more recent 2003 National Assessment of Adult Literacy (NAAL). These assessments leave open the possibility of being called "intelligence" tests leading some, like Seligman, to the general conclusion that the less literate are simply the less intelligent and society might as well cast them off – their "intelligence genes" will not permit them to ever reach Level 3 or any other levels at the high end of cognitive tests.

1998. Dr. G. Reid Lyon of the National Institute of Child Health and Human Development provided an Overview of Reading and Literacy Initiatives to the U. S. Congress Committee on Labor and Human Resources on April 28, 1998. In his testimony he stated that in learning to read it is important for children to possess good abilities in phonemic analysis. He stated: "Difficulties in developing phoneme awareness can have genetic and neurobiological origins or can be attributable to a lack of exposure to language patterns and
usage during the preschool years…. It is for this reason that the National Institute of Child Health and Human Development (NICHD) within the National Institutes of Health (NIH) considers reading failure to reflect not only an educational problem, but a significant public health problem as well. Within this context, a large research network consisting of 41 research sites in North America, Europe, and Asia are working hard to identify (1) the critical environmental, experiential, cognitive, genetic, neurobiological, and instructional conditions that foster strong reading development; (2) the risk factors that predispose youngsters to reading failure; and (3) the instructional procedures that can be applied to ameliorate reading deficits at the earliest possible time."

Discussing why some children may have difficulties learning to read, Lyon went on to say: "Children raised in poverty, youngsters with limited proficiency in English, children with speech and hearing impairments, and children from homes where the parent's reading levels are low are relatively predisposed to reading failure. Likewise, youngsters with sub-average intellectual capabilities have difficulties learning to read, particularly in the reading comprehension domain."

Taken together, these statements by a senior government scientist advisor to both the President and the Congress of the United States indicates that the NICHD considers that in some cases low literacy may result from genetic, neurological, sub-average intellectual capability or a combination of these and other factors. Again, this may contribute to wide-spread beliefs that adults with low literacy may possess faulty genes, brains, and/or intellectual abilities and are unlikely to benefit from adult literacy education programs. From a policy perspective, then, policymakers may think that funding such programs may be regarded as a poor use of public funds.

1997. In a January 7, 1997 article in the Washington Times, a prominent newspaper published in Washington DC and read by many members of Congress, columnist Ken Adelman wrote: "The age-old nature vs. nurture debate assumes immediacy as the new Congress and new administration gin up to address such issues as poverty, crime, drugs, etc.
…This, the most intellectually intriguing debate around, is moving far toward nature (and far from nurture) with new evidence presented by an odd pair - gay activist Chandler Burr and conservative scholar Charles Murray. …In brief, their new findings show that 1) homosexuality and 2) educational-economic achievement are each largely a matter of genes – not of upbringing. …If true, as appears so, the scope of effective government programs narrows. Fate, working through chromosomes, bestows both sexual orientation and brainpower, which shape one's life and success. Little can be altered - besides fostering tolerance and helping in any narrow window left open - through even an ideally designed public program. (page B-6)"

The juxtaposition of homosexuals and those of lower educational and economic achievement is an obvious rhetorical device meant to stir negative emotions about both groups, This is a rhetorical device brought back into play by Coulter in her 2006 book cited above.

1991. One of the beliefs in our culture is that the brain and its intellectual capacity is developed in early childhood. There is a widespread belief that if children's early childhood development is not properly stimulated, then there is likely to be intellectual underdevelopment leading to academic failures, low aptitude, and social problems such as criminal activity, teenage pregnancy and welfare. It will be difficult if not impossible to overcome the disadvantages of deficiencies in early childhood stimulation later in adulthood. So why invest much in adult education? We need instead to put billions of dollars into early childhood education.

That these beliefs about the consequence of early childhood development are widespread is revealed by articles written by prominent journalists in major newspapers. For instance, on Sunday, October 13, 1991 the San Diego Union newspaper reprinted an article by Joan Beck, a columnist for the Chicago Tribune, that argued for early childhood education because, "Half of adult intellectual capacity is already present by age 4 and 80 percent by age 8, ... the opportunity to influence [a child's] basic intelligence - considered to be a stable characteristic by age 17 – is greatest in early life."
A year earlier in the same newspaper on October 14, 1990 an adult family literacy educator was quoted as saying, "Between the ages of zero to 4 we have learned half of everything we'll ever learn in our lives. Most of that has to do with language, imagination, and inquisitiveness." This doesn't hold out much hope for the adults in family literacy programs.

Joan Beck was quoting research by Benjamin Bloom in the 1960s. But Bloom did not show that half of one's intellect was achieved by age 4. Rather, he argued that IQ at age 4 was correlated +.70 with IQ at age 17. Since the square of .7 is .49, Bloom stated that half of the variance among a group of adults' IQ scores at age 17 could be predicted from their group of scores at age 4. But half of the variability among a group of people's IQ scores is a long way from the idea that half of a given person's IQ is developed by age 4. This is not even conceptually possible because for one thing there is no universally agreed to understanding of what "intelligence" is. Further, even if we could agree on what "intelligence" is, there is no such thing as "half of one's intellect" because no one knows what 0 or 100 percent intelligence is. Without knowing the beginning and end of something we can't know when we have half of it.

1990. A report by the Department of Defense shows how these beliefs about the possibility of doing much for adults can affect government policy. After studying the job performance and post-service lives of "lower aptitude," less literate personnel, the report claimed that they had been failures both in and out of the military. Then, on February 24, 1990, the Director of Accession Policy of the Department of Defense commented in the Washington Post newspaper, "The lesson is that low-aptitude people, whether in the military or not, are always going to be at a disadvantage. That's a sad conclusion."

A similar report of the Department of Defense study was carried in the New York Times of March 12, 1990. Then on April 8, 1990 Jack Anderson's column in the Washington Post quoted one of the Department of Defense researchers saying, "...by the age of 18 or 19, it's too late. The school system in
early childhood is the only place to really help, and that involves heavy participation by the parents."

Regarding the news articles about the Department of Defense studies of "low aptitude" troops, the conclusions were based on analyses of the job performance of hundreds of thousands of personnel in both the 1960s and 1980s with Armed Forces Qualification Test (AFQT) scores between the 10th and the 30th percentiles, the range of scores which the Department of Defense studies called "low aptitude."

But contrary to what the Department of Defense researchers and accession policy maker stated, the actual data show that in both time periods, while the low aptitude personnel did not perform quite as well as those personnel with aptitudes above the 30th percentile, over 80 percent of the low aptitude personnel did, in fact, perform satisfactorily and many performed in an outstanding manner. As veterans they had employment rates and earnings far exceeding their rates and earnings at the beginning of the study. Further investigation by the media would have revealed these discrepancies between what the Department of Defense's researchers said and what the actual findings were. But as it stands, these popular media types of stories reinforce the stereotypes about adults with who score low on intelligence or aptitude tests and perform poorly on tests of the basic skills of literacy and numeracy.

We can find these pieces of scientific debris all the way back to the Moonlight Schools of 1911. Following her account of those educators and academics who declared that teaching grown people to read and write was contrary to the principles of psychology, Cora Wilson Stewart said, "While they went around saying it couldn’t be done, we went on doing it. We asked the doubters this question, "When a fact disputes a theory, is it not time to discard the theory? There was no reply."

Today when we ask why the funding for adult literacy education is so little so late, there is still no reply. So we just keep on teaching adults to read and write. And we do it on the cheap, even though it is theoretically impossible.
Adult Education for Social Justice

&

Workforce Development
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Cora Wilson Stewart and the Emancipation of Adult Illiterates

"The elderly lady gently took the letter that she had just dictated. Because she was blind, she had to be shown where to begin her signature. Her hands trembled so that her writing, which had been so graceful earlier in life, seemed shaky and uneven. Determined to complete the task, she doggedly persevered; after carefully completing the signature, she rested her pen." (Nelms, 1997, p. 3).

Only a few years later, in December of 1958, blind and infirm, Cora Wilson Stewart, founder of the Moonlight Schools of Kentucky "for the emancipation of adult illiterates", passed away. Her death came just shy of half a century after she had started the Moonlight Schools, which historian Wanda Dauksza Cook (1977) said "might well be classified as the official beginning of [adult] literacy education in the United States." (p. 13).

Starting the Moonlight Schools for adult illiterates in Rowan County, Kentucky, was the first of a long list of innovations for adult literacy education that Stewart introduced: the first newspaper designed especially for adult literacy students, called the Rowan County Messenger; the first reading series for adults comprised of three Country Life Readers; the Soldier's First Book used during World War I, and the Mother's First Book: A First Reader for Home Women.

In her approach to teaching adult literacy, Stewart explicitly recognized the importance of not using materials for adults that were designed for children. All of her materials integrated the teaching of literacy with the teaching of important knowledge content in farming, healthy living, civics, home economics, financial management, parenting and other functional contexts. As Stewart (1920) stated, "each lesson accomplished a double purpose, the primary one of teaching the pupil to read, and at the same time that of imparting instruction in the things that vitally affected him (sic) in his daily life" (p.71).
Striking out in a crusade against adult illiteracy in Rowan County Kentucky, Stewart went on to convince President Hoover to create the first National Advisory Committee on Illiteracy. She initiated a National Illiteracy Crusade, chaired for five times the Illiteracy Section of the international World Conference of Education Associations, spoke before the national Democratic party convention in 1920, spoke at numerous meetings across the United States, reached hundreds of thousands of listeners through radio broadcasts, and inspired numerous other states to initiate campaigns to combat adult illiteracy.

Along with her national and international accomplishments, perhaps one of the most important things that Stewart did was to develop a simple method of teaching adult learners how to write their names. She developed a special tablet that had soft paper into which students' names were etched. Then the students used thin paper to trace their names over and over until they could write their names unaided.

Later this simple technique was picked-up by Wil Lou Gray of South Carolina in her initiation of campaigns to teach illiterate adults to write their names. In turn, Gray taught this technique to Septima Poinsette Clark who used it in the Citizenship Schools of the Southern Christian Leadership Conference. Through this work, over 700,000 African Americans were taught to write their names for voter registration, and this political empowerment helped to stimulate the civil rights movement of the 1950s and 60s which would eventually transform the political landscape of the entire Nation.
Cora Wilson Stewart was profoundly aware of the importance that learning to sign their names had for the illiterate adults of the Moonlight Schools. It was their means of escaping the stigma and humiliation of making their mark. With her understanding of the importance of being able to write one's name, it is no surprise that in her older age, and blind in both eyes, Stewart clung to the power of the pen and insisted on signing her own name on letters and important documents up to the end of her life.

The year 2008 marks a half century since Cora Wilson Stewart's death, but we celebrate the 133 years since her birth on January 17, 1875, and the years, approaching the century mark, following her founding of the Moonlight Schools for adult literacy learners. No other person before or since has more forcefully fought for, and won, the right to literacy education for adults of all stripes: men and women; young and old; whites, blacks, Hispanics, and Native Americans; prisoners, soldiers, urban, and country folk.

On January 17 of each year we celebrate the life of Cora Wilson Stewart, the woman who above all others may rightly be called the Queen Mother of Adult Literacy Education in the United States of America

**Three Black Women in the Struggle for Adult Literacy and Civil Rights in the United States**

During Black History Month we celebrate the history of African-Americans in the United States. In this history, nothing is more important than the struggle of slaves, freedmen, and oppressed African-Americans to learn to read and write and to use these literacy skills to obtain their civil rights. In this history, three great African-American ladies stand out from thousands of others because of the remarkable circumstances under which they labored to help African-Americans gain the dignity and confidence they needed to stand up for their rights. This is a brief summary of some of the contributions of these three African-American ladies of literacy and liberty.
Harriet A. Jacobs (1813-1897).

One of the earliest accounts of teaching an adult to read comes from the work of the slave Harriet A. Jacobs. Even though it was unlawful to teach slaves to read, Jacob’s owner’s daughter taught her to read and write. In 1861, after she became a free woman, Jacobs wrote a book entitled, “Incidents in the life of a slave girl written by herself” (Jacobs, 1987/1861).

In it she tells the story of how she helped an older black man, a slave like her, learn to read. She said, “He thought he could plan to come three times a week without its being suspected. I selected a quiet nook, where no intruder was likely to penetrate, and there I taught him his A, B, C. Considering his age, his progress was astonishing. As soon as he could spell in two syllables he wanted to spell out words in the Bible. … At the end of six months he had read through the New Testament, and could find any text in it.”

Later in her life, after achieving her freedom, Jacobs taught school for former slaves in what were called the Freedmen’s Schools. These schools were set up after the Civil War when the U. S. Congress created the Bureau of Refugees, Freedmen, and Abandoned Lands as the primary agency for reconstruction (Morris, 1981). In the Freedmen’s Schools it was not unusual for both children and their parents to be taught reading, writing, spelling, and arithmetic in the same classroom at the same time, an early form of “family literacy” education.
Susie King Taylor (1848-1912).

During the Civil War, the Union Army initiated the practice of enlisting freed African-Americans. But it was soon apparent that there were problems in using these men as soldiers. Among other problems, it was difficult for officers to communicate with illiterate former slaves. So promotion and advancement in the army was difficult for the African-American soldiers. Many of them blamed this situation on their lack of education. In response to these needs, some officers initiated programs of education for the former slaves. One of the people engaged in teaching soldiers to read and write was Susie King Taylor (Blassingame, 1965) who was born a slave in Savannah, Georgia, in 1848. She was raised by her grandmother who sent her and one of her brothers to the home of a free woman to learn to read and write. As she explained in her 1902 book, “We went every day with our books wrapped in paper to prevent the police or white persons from seeing them” (Taylor, 1902, p. 5).

Later, as a freed woman traveling with the 33rd Colored Regiment, Taylor (1902) described some of the macabre conditions under which she taught. "Outside of the Fort were many skulls lying about; I have often moved them one side out of the path. The comrades and I would have wondered a bit as to which side of the war the men fought on, some said they were the skulls of our boys; some said they were the enemies; but as there was no definite way to know, it was never decided which could lay claim to them. They were a gruesome sight, those fleshless heads and grinning jaws, but by this time I had become used to worse things and did not feel as I would have earlier in my camp life" (p.31).

She went on to say, “I taught a great many of the comrades in Company E to read and write when they were off duty, nearly all were anxious to learn. My husband taught some also when it was convenient for him. I was very happy to know my efforts were successful in camp also very grateful for the appreciation of my services. I gave my services willingly for four years and three months without receiving a dollar” (Taylor, 1902, p. 21).
Septima Poinsette Clark (1898-1987).

Septima Poinsette Clark, whom some called “the Queen Mother of the Civil Rights Movement” of the 1960s, was an innovator in teaching adult reading and writing within the functional context of the civil rights movement to free African-Americans from the oppression of those wanting to deny them full citizenship. In this regard, her work in the United States foreshadowed the later work of the Brazilian educator, Paulo Freire, in developing a Pedagogy of the Oppressed (Freire, 1970).

Clark followed functional context education methods in using “real life” materials for teaching adults to read (Clark, 1986). On January 7, 1957, Clark and her teachers started the first Citizenship School serving adult African-Americans on Johns Island in South Carolina. Clark (1962) recalled that when the teachers asked the students what they wanted to learn, the answer was that, “First, they wanted to learn how to write their names. That was a matter of pride as well as practical need. (p. 147).

In teaching students to write their names, Clark instructed teachers to write student’s names on cardboard. Then, according to Clark (1962), “What the student does is trace with his pencil over and over his signature until he gets the feel of writing his name. I suppose his fingers memorize it by
doing it over and over; he gets into the habit by repeating the tracing time after time.” (p.148). She went on to say, “And perhaps the single greatest thing it accomplishes is the enabling of a man to raise his head a little higher; knowing how to sign their names, many of those men and women told me after they had learned, made them FEEL different. Suddenly they had become a part of the community; they were on their way toward first-class citizenship.” (p. 149).

Working with Dr. Martin Luther King, Jr. in the Southern Christian Leadership Conference (SCLC) and other civil rights groups from 1962 to 1966, Clark lead the Voter Registration Project that subsequently prepared 10,000 teachers for citizenship schools where they taught literacy within the functional context of voter registration. Speaking of a cleaning woman who asked to be taught to read and write in the Citizenship School on Johns Island, South Carolina, Clark (1962) wrote: "This woman is but one of those whose stories I could tell. One will never be able, I maintain, to measure or even to approximate the good that this work among the adult illiterates on this one island has accomplished" (p.154).

SELMA: The March From Literacy to Voting Rights

Promotional materials state that the 2014 movie, SELMA, “…is the story of a movement. The film chronicles the tumultuous three-month period in 1965, when Dr. Martin Luther King, Jr. led a dangerous campaign to secure equal voting rights in the face of violent opposition. The epic march from Selma to Montgomery culminated in President Johnson …signing the Voting Rights Act of 1965, one of the most significant victories for the civil rights movement.”

The movie focuses on the march from Selma to Montgomery, Alabama, the violence and indignities the marchers encountered, and the interactions of President Lyndon Johnson and Dr. Martin Luther King, Jr. in bringing about the Voting Rights Act of 1965. Missing, however, are the activities of thousands of African-American literacy teachers
who taught illiterate adults how to read and, most importantly at the time, how to write their names so they could meet the literacy demands for voting across the southern states.

Working with Dr. Martin Luther King, Jr. in the Southern Christian Leadership Conference (SCLC) and other civil rights groups from 1962 to 1966, Septima Poinsette Clark lead the Voter Registration Project that subsequently prepared 10,000 teachers for citizenship schools where they taught literacy within the functional context of voter registration.

Brown-Nagin (1999) reported that, "The most critical elements of the citizenship program...was that it was to be functional: [adults] learned to read using state and federal constitutions, codes of law, sample ballots, and other legal documents as ‘texts.’ ...citizenship school instructors taught practical matters such as how to: make purchases from mail order catalogues; utilize bank accounts; compute income tax; utilize social security and disability benefits; and take care of the many other affairs involved in functional adulthood" (p. 94). These efforts eventually lead some 700,000 African-Americans to vote. (Clark, 1986, p.70).

In 2000, writing about Clark, Michael Cary stated, “As newly literate black voters tried to register, they encountered more barriers, like tests without objective answers, the correctness of an answer depending on the whim of the registrar. ...Responding to such procedural devices, Clark participated in protests and in lobbying Washington to have these practices stopped. Eventually, in 1965, Congress passed the Voting Rights Act, and the federal government subsequently moved with a firm hand to end voting discrimination in the
South. ... Preparing for the next election in 1966, Clark set up 150 Citizenship Schools in Selma, Alabama, from May 18 to August 15, 1965, paying teachers $1.25 an hour for two hours of teaching every weekday morning. They registered over 7,000, and the new voters soon made themselves heard” (Cary, 2000). By the time Clark retired from her SCLC work in 1970 over a million African-Americans had registered to vote in the south.” (Clark, 1986, p.70).

In 1964, in recognition of the role that she played in the civil rights movement, Dr. Martin Luther King, Jr. insisted that Septima Poinsette Clark accompany him to Norway where he received the Nobel Peace Prize. King considered Septima Poinsette Clark the “Mother of the Movement.” As for herself, Clark spoke about the role of literacy education and learning in the civil rights movement and wrote: “How can anybody estimate the worth of pride achieved, hope accomplished, faith affirmed, citizenship won? These are intangible things but real nevertheless, solid and of inestimable value" (Clark, 1962, p. 154).

In the U.S. presidential election of 2008, the “intangible” became “tangible” thanks in large part to the march from literacy to the Voting Rights Act of 1965. In the 2008 Presidential election, 13 percent of the voters were African-Americans and some 96 percent exercised their right to cast their vote for an African-American candidate who would go on to become the first African-American President of the United States.

Ambrose Caliver and Freedom’s People

In 1957, I walked into a department store in downtown Wichita Falls, Texas and saw that it offered a choice of water fountains: one for “White” and another for “Colored” people. At the time, I was an enlisted man in the U.S. Air Force stationed at Shepard Air Force Base, right outside of Wichita Falls. At age 21, I had never seen these sorts of indicators of what I later learned were “Jim Crow” laws permitting, often
requiring, separate eating, drinking, schooling, etc., facilities for White and “Colored” people.

A decade later, in 1967, I had left the U.S. Air Force, attended the University of Arizona, received a Ph.D degree in Experimental Psychology, and was working as a Research Scientist for the Human Resources Research Office (HumRRO) of the George Washington University’s field unit in Monterey, California. Much of my research and development was concerned with the education of lower aptitude, low literate U.S. Army recruits in a special program called Project 100,000, over 36 percent of whom were young Black men (Sticht, et. al., 1987, Table 10, p. 42).

In the decade between 1957 and 1967 major changes occurred in the Nation’s treatment of African Americans. Gone were many of the old Jim Crow laws and practices as the 1964 Civil Rights, the 1965 Voting Rights, and the 1966 Adult Education acts were passed by the U.S. Congress and signed into law by President Lyndon Johnson. But these laws did not come easy, they were fought for by many outstanding women and men of both races.

One African American who fought the Jim Crow laws and sought decent education and further civil rights for African Americans was Dr. Ambrose Caliver (B1894-D1962), who “… changed the face of black education on a national scale. Dr. Caliver devoted much of his professional life to adult literacy, although he also took an active role in such matters as displaced persons, human rights, public affairs, aging, and professional development of adult educators” (Wikipedia, 2017).
Caliver began his federal work on behalf of African American education when he was appointed by President Herbert Hoover as Senior Specialist for Negro Education in the United States Office of Education (USOE). He worked in that position under President Franklin D. Roosevelt and was a member of Roosevelt’s so-called “Black cabinet. It was while he worked in this position that Caliver took advantage of the technology of radio to raise awareness of the differences in educational opportunities and resources between Whites and Blacks. Under his direction, a nine-part radio program called “Freedom’s People” was produced and broadcast during 1941-1942.

An online program by American Radio Works (2017) indicates that the first program in Freedom’s People started on Sunday afternoon, September 21st, 1941. It started with the Announcer speaking about immigrants to America:

“From the old world they came. High with hopes and strong. To America they brought this hope and strength, and founded a nation of splendid freedoms. But this is not their story. No, this is the story of those who did not come but were taken. The story of those who lost freedom when they came upon our shores. And for years they tilled our soil, gathered our crops, and made the land good. Some won liberty. Others waited. Then freedom came to all, a liberty well deserved, a liberty triumphant. Yes, this is the story of the American Negro, 13 million citizens of the United States. And now the National Broadcasting Company in cooperation with the United States Office of Education in the Federal Security Agency brings you this program dedicated to and conceived by the American Negro, truly Freedom's People!”

According to the American Radio Works, “Freedom's People reached millions of Americans, and study guides about African American history were printed for school and community groups to use. The show tried to humanize blacks in the eyes of their fellow Americans by cataloging black accomplishments and qualities.”
During and following World War II, Caliver continued his work on adult literacy and the education of African Americans. I first encountered his work while reading Wanda Cook’s slender volume on the history of adult literacy education in the United States. She cites a 1946 paper by Caliver entitled “Adult Education of Negroes” which discusses the Project for Adult Education of Negroes, a major effort to “raise the educational level of a large number of Negroes whom the Selective Service and the 1940 census described as functionally illiterate.” Clark goes on to say, “Directing the project was Ambrose Cavalier (sic) the USOE specialist for higher education of Negroes” and reports that during the project “Nearly 1,000 teachers of adults were exposed to new methods and techniques during the project” (Clark, 1977, pp. 57-58).

There can be no doubt that Caliver’s work in the struggle against the Jim Crow laws following the Civil War and his advancement of African American history, literacy, and education was a cornerstone in the foundation on which the Civil Rights and Voting Rights laws of the 1960s were constructed. Unfortunately, he did not live to see these laws passed and enacted. He was elected President of the Adult Education Association of the United States of America in 1961, but died the next year while still in office.

Yesterday, when I went into my neighborhood Walmart store, I saw just one drinking fountain….for everyone!

Postscript: In 1949, the Dean of the Harvard Law School wrote to Caliver at his U.S. Government office and asked for advice on how to attract, support, and educate more African American lawyers who could provide legal support to their communities. A half century later, in 1991, a young African American man graduated from Harvard Law School and some 20 years later Barack Hussein Obama became the first African American President of the United States of America. He was one of Freedom’s People.
From 1987 through 1995 I had the honor and privilege of working with Paulo Freire for one week each year when we both served as members of UNESCO's International Jury that selects the literacy prize winners recognized by UNESCO yearly on International Literacy Day.

Already an international giant of adult literacy education when he joined the Jury in 1987, Paulo brought his philosophy of literacy for liberation and freedom to the evaluation of candidatures for literacy prizes from countries where millions of adults were oppressed. He brought a passion to the evaluation of candidatures often expressed by clenching his hands in a fist, clutching his chest and saying, "I love this program!" He was also quick to provide a critical commentary when he thought that a program had mistakenly claimed that it followed "the Freirean method", and he admonished the Jury that there was no such method.

During the Jury's deliberations regarding candidatures, and on our breaks when we would take tea or coffee, I had occasions to listen to him and to talk informally with him about his philosophy of education and literacy, and how he had worked early on in his career with the poor and oppressed peasants of Brazil. Still today, millions of adults and their families around the world live in constant fear that they will not have adequate water, food, health care and security for their very lives. Many live in conditions of economic and political oppression, and they may perceive that they have little chance in changing their lives in any significant manner. For this reason they may elect to stay away from literacy classes. They see no use for literacy in their lives. In these circumstances Freire's approach to adult literacy education, if
not a method, as he would claim, is nonetheless an approach that can instill a feeling of confidence in adult learners and motivate them to engage in literacy learning.

In his work, Freire developed an approach to education aimed at helping adults liberate themselves from the oppression of others. To do this he first concentrated on teaching adults to "read the world" so they could then "read the word." By "reading the world" he meant helping adults understand the differences between the world of nature and the world of culture. Nature is made by natural forces and is not subject to change by humans. Culture on the other hand is made by humans and can be changed by humans. We "read the world" to know what is nature and what is culture. Oppressive conditions are cultural and hence capable of being changed by humans.

Literacy is a technology for helping humans change the cultural contexts in which they live so that they can achieve social justice and is hence worthwhile learning. This line of reasoning was to motivate adults to learn to read and write. To start the process, Freire introduced the use of "multiple literacies," though he did not call his practice that. He used pictures that adult literacy students "read" to distinguish what in the picture was due to nature and what was due to culture, i.e., human actions.

In discussing the pictures, the adults demonstrated that they possessed a lot of knowledge about the world, including both nature and culture. This knowledge was drawn on in teaching reading.
Freire listened to the adult learners discuss pictures depicting various situations and then chose words that the students used to start the process of teaching literacy. Words with a lot of emotional meaning, such as "favela" (slum) were selected to teach decoding of the written language. The word was first discussed, along with a picture of a situation denoted by the word. Then the word was broken into syllables -FA-VE-LA. This was continued until the word could be read (decoded) fluently. This method of "reading the world" and then "reading the word" was used extensively to build on the knowledge that adults possessed and to teach them to read the language that they used to express their knowledge. Then new knowledge was introduced to stimulate adults to take actions to change their oppressive situations.

Freire contrasted this learner-centered, participatory approach in which the adults helped determine the content and direction of their own education with the more traditional, school-centered education in which policymakers, administrators or teachers determine the content and direction of education and attempt to deposit and "bank" knowledge in learner's minds even if they do not understand the value of the new knowledge.

In 1975 Paulo Freire was awarded a UNESCO Literacy Prize for his work on pedagogy of the oppressed. Over a quarter century later, in 2003, a non-governmental organization called the International Reflect Circle (CIRAC) was awarded a UNESCO literacy prize for its work which built upon the work of Freire. The acronym REFLECT stands for Regenerated Freirean Literacy through Empowering Community Techniques.

The REFLECT approach to adult literacy development makes use of "multiple literacies", much as did Freire in using pictures and other graphic tools to help adults "read the world." To assist adults in capturing their own knowledge the REFLECT teachers show them how to make maps of their communities, construct matrices, flow charts, and other
graphics to analyze their needs and assist them in arguing for needed services and social justice.

REFLECT makes use of internet technologies and has formed an international network of some 350 organizations and individuals in 60 nations to facilitate sustainable community development using a participatory and democratic process of reflection by adults in the development of their own literacy education.

Through the work of REFLECT and numerous other groups around the world, Paulo Freire's learner-centered, participatory approach to adult literacy education continues to help marginalized, socially excluded adults develop the confidence and abilities they need to not just "read the world," but to change it. This is an enduring legacy of the work of Paulo Freire.

How “McNamara’s Moron Corps” Fought the “Poverty War” and Won!

On August 23 of 1966, U. S. Secretary of Defense Robert S. McNamara stood before the Veterans of Foreign Wars and announced that in addition to fighting the war in Vietnam, the military services were also going to help fight President Lyndon Johnson's War on Poverty at home. The Services would start taking in hundreds of thousands of undereducated, disadvantaged young men who were being rejected for service because their mental aptitude scores were at the lower end of the Armed Forces Qualification Test (AFQT). Because the plan was to enlist about 100,000 lower aptitude recruits a year, it was called Project 100,000.

Project 100,000 was not a popular idea in military circles. The Army Times editorialized: “Are the services likely to get any reasonable mileage from such people? Past performance indicates not. Is this any time to require the services to take on a large scale “poverty-war” training mission? We would think not.”
Years later, the Department of Defense issued a report claiming that the Project 100,000 personnel were failures both in and out of the military. The Washington Post of February 24, 1990, quoted the Director of Accession Policy of the Department of Defense saying "The lesson is that low-aptitude people, whether in the military or not, are always going to be at a disadvantage. That's a sad conclusion." Sixteen years later the New York Times of February 27, 2006 Harvard University professor Kelly Greenhill had an opinion piece entitled “Don’t Dumb Down the Army” and stated that, “…Project 100,000 was a failed experiment. It proved to be a distraction for the military and of little benefit to the men it was created to help.”

However, a recent analysis shows that the Department of Defense report and the newspaper articles based on it were wrong. In a new book entitled “Scraping the Barrel: The Military Use of Substandard Manpower” (Sanders Marble, Ed., Fordham University Press, 2012), I have a chapter called “Project 100,000 and Afterword” in which I indicate what past analyses of Project 100,000 have done wrong, and I come to different conclusions about how well these personnel performed during their military service and how they escaped poverty as veterans.

First, regarding their military service, the Project 100,000 personnel actually far exceeded by a large margin the negative expectations for their performance as a group. Instead of finding a 100 percent failure rate, which was the expected rate indicated by the fact that all the Project 100,000 men were taken from a group that had been excluded from service because of their low aptitude, it was found that across all four Services some 85 percent actually performed well in basic training, job training, and on the job, some 97 percent served without criminal or lesser disciplinary actions, and some 85 percent completed their tour of duty with honor. Thus, contrary to the comments by the Army times, the data indicate that the military services got much more than just "reasonable mileage" from the Project100,000 personnel.
The goal for Project 100,000 as a part of the War on Poverty was that military service would help undereducated, unemployed young men escape the "cycles of poverty" considered prevalent at the time. In analyses I directed we found that before their service 46 percent of the Project 100,000 personnel were unemployed and on average they were earning below poverty wages for an individual. However, some 20 years after their service more than 80 percent were employed and they were earning well above the poverty level for a family of four. Further, their rate of earnings increase from the mid-1960s to the mid-1980s was well above that of non-veterans used by the Department of Defense as comparison groups. These data support the idea behind Project 100,000 that military service would provide the disadvantaged recruits of Project 100,000 a "leg up" for escaping the cycles of poverty.

Years ago, on April 25, 1985, I conducted the only interview Secretary McNamara ever gave about Project 100,000. He told me “There was immense resistance initially in the services to Project 100,000 …to be absolutely frank with you - I told you, I believe, that before the experiment began, this was known as McNamara’s Moron Corps.”

I discussed with Secretary McNamara the results of an early analysis of Project 100,000 personnel performance showing that most completed their first term satisfactorily, many performed in an outstanding manner, and on average they were doing better three years later in their post-service lives than comparable non-veterans. At the end of my interview with Secretary McNamara he said, “Now, this kind of approach shows that there is something that can be done, and people - individuals in our society - that society thinks can be cast off need not be cast off.”
This is a message that we need to keep in mind when making decisions about people’s lives based upon fallible standardized tests. If we are to rely more and more upon such tests to make important decisions affecting people’s lives, our aim should always be to support policies and practices that foster social inclusion, not exclusion.

**Literacy and Human Resources Development at Work: Getting Double Duty Dollars: Then and Now**

In 1983, I wrote a report entitled "Literacy and Human Resources Development at Work: Investing in the Education of Adults to Improve the Educability of Children". In it I argued that “Today, the predominant approach is, in effect, to write-off as lost causes youth and adults who have not learned the basic skills well, and to place billions of dollars in remedial money in school-based programs for their children. …It may will be that a commitment to the continued development of youth and adults, that matches our commitment to the remediation of their children in pre-school and elementary school programs, would pay double rewards. Through education of the adults, we might also improve the educability of their children.”

Later, I learned that in the early 1900s and up into the 1960s, African-Americans were encouraged to follow the doctrine of getting “Double Duty Dollars.” This meant that African-Americans should avoid businesses that discriminated against them or had separate entrances or separate water fountains for Whites and Blacks, and to instead shop at African-American owned businesses. This way their dollars would perform double duty: they could get needed goods and services and they could also sustain and support the growth of businesses in the African-American community.

I borrowed the idea of getting Double Duty Dollars and applied it to overcoming discrimination against the education of youth and adults and argued for investing in the literacy education of adults to help the adults overcome limitations in their own education, while also helping their children achieve better in school.
Twenty years after the publication of my 1983 report, in 2003, the National Coalition for Literacy produced an adult literacy education advocacy report entitled "A Legislative Position Paper on Adult Education & Literacy". The purpose of the paper was to advocate for fiscal year 2004 appropriations from the federal Congress and Executive administration and it was largely based on a position paper I wrote in 2002. In the 2003 National Coalition for Literacy report it was stated:

"Adult education researcher, Thomas Sticht asserts that the federal government can get double duty dollars by "redirecting how monies are spent by the Departments of Education, Health and Human Services, and Labor on education and employment training." He asserts that by focusing on the intergenerational transfer of cognitive skills and functional context education "it is possible to get twice or even three times the education or employment outcomes that these programs aim to produce." His paper "Double Duty Dollars: Investing in the Education of Adults to Improve the Educability of Children and the Employability of Their Parents" explains how this can be accomplished." End quote

Getting Multiplier Effects From Adult Literacy Education

From 1979 through 2003 I served on UNESCO's International Literacy Prize Jury selecting winners of UNESCO's annual literacy prizes awarded on September 8, International Literacy Day. One of the important lessons I learned from reading hundreds of applications for literacy prizes and speaking with adult literacy educators from around the world was that adult literacy programs generally produce multiplier effects, meaning that important outcomes beyond the learning of literacy are frequently forthcoming.

Now, in 2013, the National Coalition for Literacy is mounting another advocacy campaign with a similar theme about the returns on investment in adult literacy education as was used in the 2003 Double Duty Dollars activity. This time, however, the advocacy campaign draws upon the professional wisdom and scientific research indicating that adult literacy programs frequently produce multiplier effects. The 2013
campaign will be launched October 8 when the first results of the Program for the International Assessment of Adult Competencies (PIAAC) are released. This time the theme for the advocacy effort is called “Investing In Adult Education PAYS!”

In the forthcoming campaign, the NCL will be developing advocacy messages consistent with the theme Investing in Adult Education PAYS! Each message will be supported by a fact sheet summarizing the applicable PIAAC findings and other relevant, recent data as it pertains to the focus of each message. Perhaps by documenting the multiplier effects of adult literacy education advocates will be able to convince policymakers and private foundations that they will get Multiple Duty Dollars! That's a good ROI!

**Investing in the Education of Adults to Improve the Educability of Children and the Employability of Their Parents**

In 1980, I traveled from Heidelberg, Germany, where I was conducting research on adult education and training, to Toronto, Ontario, Canada where I presented an invited address to the members of the National Academy of Education. A revised version of my presentation was later published with the title Literacy and Human Resources Development at Work: Investing in the Education of Adults to Improve the Educability of Children (Sticht, 1983).

The main point of my presentation was that millions of undereducated adults were seeking employment or were already employed in low wage jobs and were in need of increased literacy skills. I argued that employers could offer literacy training which was integrated with work and job skills training and accomplish both the improvement of the literacy skills and job performance of the adults. I further argued that in many cases, through the intergenerational transfer of their improved literacy and the new positive feelings that the newly educated adults would experience about their abilities to learn, this could contribute
to the improvement of the educational achievement of the children of these workers.

A decade later I had the opportunity to test the idea that investing in the education of adult language, literacy, or mathematics in the workplace could improve both the skills of the employees and the educability of children. In several manufacturing plants in the Chicago area staff of the Center for Education Resources in Des Plaines, IL had developed literacy programs integrated with job-related materials and I was asked to serve as an external evaluator of the programs in six plants. I found that not only were large improvements in job-related English language, literacy, or mathematics achieved, but with those workers who were parents, some 40 percent reported that they now read more to their children. This result, which is typically one of the goals of pre-school or family literacy programs, was obtained as a spin-off of the adult literacy programs.

Now, to bring this discussion up to date, I note that President Obama’s new choice for his Council of Economic Advisors, Professor Alan Krueger of Princeton University, has been an advocate for adult education and training. In fact in 2003 he and the economist James Heckman, engaged in a sort of
debate in which Heckman downplayed the economic benefits of adult education and training and argued instead for increasing investments in early childhood education (Heckman & Krueger, 2004). In particular, Heckman argued that such investments improve emotional, non-cognitive aspects of children’s development and these are the factors that produce the greatest return on investments in early childhood education.

My position is that both Krueger and Heckman are right on target. Early intervention, as Heckman calls for, is necessary for improving children’s educational achievement and life chances. But Krueger is also correct in calling for more investments in adult education and training because this can lead to both better social and economic circumstances for parents. Then, through the intergenerational transfer of cognitive and non-cognitive factors from parents to their children, this can also bring about those traits in children which Heckman finds so valuable.

Elsewhere I have argued that early childhood education depends for its success in large part on what I call early parenthood education (Sticht, 2011). An important point for considering what I call a multiple-life-cycles education policy is that we need to stop thinking in terms of a single life span, sometimes called lifelong learning, and pay more attention to the intergenerational transfer of language, literacy, cognitive, and non-cognitive aspects of development.

From this viewpoint, when we invest in the education and training of adults, as Krueger calls for, we can improve the educability of children, as Heckman calls for. This way we get double duty from our education dollars. We elevate both adults and their children at the same time. In hard (or any other) economic times, that makes good “cents” to me.
Strategies for Education and Training of Undereducated Adults in Hard Economic Times

During hard economic times there is clearly an urgent need for undereducated adults to receive solid basic skills education in the context of training for well paying jobs and areas of entrepreneurship. Of particular concern is the need for education and training of many poorly skilled women who are single and managing families on their own.

For several years I worked on and off with Wider Opportunities for Women (WOW) located in Washington, DC, on adult literacy projects that followed Functional Context Education principles and integrated basic skills education (reading, math) with job skills training for non-traditional, well-paying jobs for women, and business skills training. The last project that I worked on with WOW was its Six strategies for Family Economic Self-Sufficiency project.

As part of the project, in 1999 I worked with a women’s organization in San Francisco to illustrate how Functional Context Education (FCE) principles could be followed in microenterprise training and development. This provides a good resource for adult basic skills and vocational/job skills education providers. Here is a little background about the Six Strategies project, FCE, and Microenterprise Training and Development.

Six Strategies for Family Economic Self-Sufficiency—Overview

For many families, especially those moving from welfare to work, self-sufficiency cannot be achieved in a single step. It requires strategies that create ladders out of poverty—strategies that provide the assistance, guidance and time needed for families to become self-sufficient. Recognizing this, Wider Opportunities for Women promotes Six Strategies for Self-Sufficiency:

* The Self-Sufficiency Standard
* Targeting Higher-Wage Employment
* Nontraditional Employment for Women
* Functional Context Education
* Microenterprise Training and Development
* Individual Development Accounts

Why the Six Strategies?

* Because women currently earn 74¢ for every dollar men earn.
* Because 60% of all minimum wage workers are women.
* Because most welfare recipients leaving the rolls for work earn very low wages.
* Because nearly one in three American households possesses zero or negative assets.

These realities demonstrate the critical need for strategies that will help families move out of poverty and into lasting economic security. The Six Strategies are tools for individuals, community-based organizations, and state- and local-level policymakers to use to truly help low-income families move out of poverty and achieve long-term economic stability and independence.

In today's policy environment—in which welfare and workforce legislation have devolved power to states and localities—new and effective strategies are urgently needed to aid low-income people:

Functional Context Education (FCE)

* What it is and why it works
* Approaches
* State and federal legislation
* Resources pertaining to this strategy

What it is and why it works

Functional Context Education (FCE) is an instructional strategy that integrates the teaching of literacy skills and job content to move learners more successfully and quickly toward their educational and employment goals. Programs
that use the FCE model are more effective than traditional programs that teach basic skills and job skills in sequence because this innovative approach teaches literacy and basic skills in the context in which the learner will use them. Clients see clearly the role literacy skills play in moving them toward their goals. This strategy promotes better retention, encourages lifelong learning and supports the intergenerational transfer of knowledge.

* For adults who have already experienced school failure, enrollment in programs that use traditional approaches to teaching often reproduce that failure. Functional context education programs address this problem by using content related to adult goals to teach basic skills.

* Basic education and technical training must be relevant to the skills and education required by jobs if low-income persons are going to succeed in becoming economically self-sufficient. In addition, most adults do not have time to spend years in basic education programs learning skills that may seem unrelated to their educational and economic goals.

* Given welfare time limits and restrictions on education and training, it is more important than ever that individuals master basic and job-specific skills as quickly and efficiently as possible.

Microenterprise Training and Development

* What it is and why it works
* Approaches
* State and federal legislation
* Resources pertaining to this strategy

What it is and Why it Works

Microenterprise development is an income-generating strategy that helps low-income people start or expand very small businesses. Generally, the business is owned and operated by one person or family, has fewer than five
employees and can start up with a loan of less than $25,000. Microenterprise is an attractive option for low-income women who may have lacked opportunity but who are highly motivated and have skills in a particular craft or service.

In the current weak economy, unemployment and underemployment are high. The lack of quality employment options—especially for low-income, low-skilled women—makes microenterprise development a critical strategy for moving families out of poverty.

* Low-income women entrepreneurs, especially those living in rural or inner-city communities isolated from the economic mainstream, often lack the contacts and networks needed for business success.

* Peer networks (such as lending circles and program alumnae groups) help women learn to earn from each other, build self-esteem and organize around policy advocacy.

* Linkages between micro-entrepreneurs and more established women business owners provide program participants with role models, facilitate an ongoing transfer of skills, and expand networks.

I hope that adult literacy and vocational/job training educators can work together with business, industry and those desiring microenterprise or entrepreneurship education to follow WOW’s six strategies for self-sufficiency and develop effective programs that integrate basic skills and vocational skills education. As Russ Tershy, the former Director of the Center for Employment Training (CET) in San Jose, CA used to say, there is only one piece of paper for undereducated adults more valuable than a GED in times of need—a good paycheck!

This is the time to eschew literacy programs that are too often too irrelevant to the critical life contexts of adults and to aim for strong, intensive, meaningful basic skills/vocational skills education that can get people on their economic feet quickly.
Then that should be followed by additional upskilling and further education. But first folks need a way to make a good living!

**Toward the 21st Century Orchestration of Learning Contexts for Adults**

In October of 1977, I participated in Hearings before the Committee on Science and Technology of the U.S. House of Representatives. The subject of the hearings was Computers and the Learning Society. My presentation was concerned with basic research on the role of media and other technologies, including literacy and computers, in changing language and thinking processes in more indirect ways.

Some of the implications I drew from basic research on cognitive science and technology were that “We cannot restrict our concern to instruction in formalized classrooms, but will include learning in various contexts….the classroom teacher will become in part an “orchestrator” of the child’s various learning experiences. …We will be concerned with the social implications of new media and technologies to discover which groups of citizens are taking advantage of the new tools for thought, and to discover what skills may be being modified in these groups as the result of the use of new media and technologies” (Sticht, 1977, pp. 370-371).

In late 1982, I was contacted by the U.S. Navy Personnel Research and Development Center (NPRDC) in San Diego to consider taking on the development of new reading and mathematics programs for Navy personnel. A major thrust of the R & D was to use the newly emerging personal computers for the delivery of basic skills instruction for Navy personnel. I agreed to direct this work and by 1986 my team of researchers and teachers had developed an integrated technologies classroom using books, computers, peer instruction, and teachers who orchestrated the uses of all these instructional approaches, with all basic skills instruction contextualized in important Navy occupational content and tasks.
In the R & D for the Navy reading and mathematics programs we also conducted some exploratory research using Heathkit’s HERO 1 personal robot which could learn to recognize and speak words for instructing in literacy.

We found that HERO was very motivational for learning with both children and adult literacy learner. This exploratory research was reported in a paper entitled “Literacy, Cognitive Robotics and General Technology Training for Marginally Literate Adults” at a conference in May of 1985 and later that year I presented parts of the paper in testimony to U. S. Congressional hearings on “Illiteracy in America” (Sticht, 1985, pp.115-126).

In the paper on cognitive robotics (Sticht, 1987) I described the coming of “cognitive robots” that would replace many ”white collar” workers by virtue of their capabilities for reading, writing, speaking, translating languages, etc. I also called attention to the particular difficulties which would be encountered by African Americans and females of any race or ethnic group in working with cognitive robotics and other
technological advances due to their generally low scores in science and technology on the Armed Services Vocational Aptitude Tests (ASVAB). I brought this situation to the attention of the U. S. Congress in my testimony at the special hearings on Illiteracy in America (Sticht, 1985).

Assessing Adult Literacy by Telephone

In the 1990s, colleagues and I explored the use of telephone technology to estimate literacy levels of adults (Sticht, Hofstetter, & Hofstetter, 1996; Hofstetter, Sticht & Hofstetter, 1999). We used random digit dialing and spoke to native English speaking adults and assessed their knowledge of vocabulary, books, authors, political leaders, and other domains of knowledge. We correlated assessment results via the telephone to those obtained by reading and found a correlation around +.80 for the relationship of the telephonic and reading assessments. We were also able to obtain all the relationships among the knowledge assessments and employment, wages, gender, ethnicity, etc. obtained by the National Adult Literacy Survey (NALS) of 1993 and its subsequent national and international spin-offs. This was obtained at a small fraction of the cost of door-to-door surveys.

I presented findings from our telephone surveys of adult literacy to a meeting convened by the National Center for Education and Statistics (NCES) and a report was subsequently published as a working paper by the NCES (Sticht, 2000). In 2006, in London, UK, I presented an extensive overview of the research colleagues and I had conducted on listening and reading using various technologies. This presentation was later published in the UK (Sticht, 2008).

Relevance to Today’s Education Issues

Today, the work we did for the U. S. Navy which integrated the use of books, peer instruction, computers and teachers, and contextualized basic skills instruction within the Navy occupational contexts finds new expression in “blended”
instruction using online materials accessed via computers along with classroom instruction. Additionally, the use of basic skills integrated into and contextualized within occupational or other important content is now funded within the Workforce Innovation and Opportunity Act of 2014 as well as in programs sponsored by many private foundations.

Interest in the sort of research colleagues and I did on listening and reading with adult learners has recently resurfaced on the U.S. Department of Education’s LINCS discussion lists (Rosen, 2015) in relation to the use of listening to speech (auding) as a substitute for or adjunct aid to learning for those with difficulties in reading. And the need I identified in Congressional hearings in 1977 to provide opportunities for adult learning in various contexts has seen the appearance of the National Workplace Literacy Program of the late 1980s-1990s with education conducted at workplaces and numerous online educational web sites providing adult basic skills education.

Unfortunately, some thirty years following my Congressional testimony regarding cognitive robotics and the technological shortcomings of African Americans and females in general, in February 2015, the online magazine Fortune ran an article about white-collar jobs that robots have now taken while displacing many human workers. On June, 2015 the online U.S. News ran an article stating “Multi-million dollar initiatives by both the public and the private sectors have failed to close gender and racial gaps in science, technology, engineering and mathematics (STEM) fields…”

In late 2015, the National Coalition for Literacy (NCL) launched the “Adult Education Brings the American Dream in Reach” advocacy campaign to increase national awareness of the need for adult education in basic skills in the lives of tens of millions of American adults. Perhaps by building on past successes, and taking cognizance of contemporary issues which threaten the educational opportunities of adults, the Adult Education and Literacy System of the United States will receive the financial support it needs to “orchestrate” the
In 1985, I presented a paper at an international conference on The Future of Literacy in a Changing World. My paper was entitled Literacy, Cognitive Robotics, and General Technology Training for Marginally Literate Adults. In the paper I discussed the topic of Robot and Human Resources Development as a research project colleagues and I were working on. I stated that: “At the present time, colleagues and I are involved in research projects which may lead to both the development of technology for replacing humans in the performance of various literacy and other cognitive tasks, and to new approaches for developing literacy and technological knowledge of marginally literate youth and adults so they may “deal with and administer” the new technologies.”

I went on then to state: “In this research, we are beginning to explore the development of robots which will perform jobs comprised of literacy and cognitive tasks that previously were performed by human resources. For these types of jobs, then, one may in the future have to determine if investment in robot resources development is more cost-beneficial than investment in human resources development to acquire the needed levels of productivity from the work force, when the latter is comprised of people and robots.” I went on to note that “The capability is emerging, therefore, for the development of “cognitive robots” having the potential for replacing many of the most highly literate workers of the “information age”.

Now, over 30 years later, Paul Beaudry, economist at the University of British Columbia, and colleagues have produced a report published by the National Center for Economic Research (NBER) entitled “The Great Reversal in the Demand for Skill and Cognitive Tasks”. In this report they point to the growing difficulty recent college graduates are having finding jobs for which their degrees have prepared
them. They note that almost half of the graduates are working in jobs for which they are overqualified, a third of which do not require any education beyond a high school diploma.

As it turns out, Beaudry and colleagues are pointing to the effects on employability of robotizing many so-called “higher order” cognitive skills much as I discussed in my 1985 paper. As a part of the explanation for why so many college graduates are finding it difficult to find high skilled jobs matching their college preparation, Beaudry told newspaper reporters, that “…the reason there used to be so many good jobs is that good people were needed to develop, build, and install high-tech systems. But now that those are in place, robots and computers are automating more jobs than ever… Once the robots are in place you still need some people, but you need a lot less than when you were putting in the robots. …So, he says the unemployment rate won’t really go down until we reach the point where we need to develop a new wave of even more technologically advanced robots.”

The latter touches on the second aspect of my 1985 paper in which I discussed curriculum development methods for integrating literacy and technical training that will simultaneously increase a person’s basic skills of reading, writing, and arithmetic, while developing their technological knowledge so that they can find work in higher skilled trades and technologies. I noted that “A difficulty with the great majority of literacy and technical, vocational training programs is that they view literacy and technological knowledge acquisition as two different things. Literacy is something one must first get and then apply to the learning of job technical skills. But in fact, nothing could be further from the truth.”

Today, both the U. S. Department of Education and the U. S. Department of Labor are sponsoring R & D projects to integrate the teaching of basic skills and career-related, vocational education. There is now the question as to whether or not the Functional Context Education approach, as the integrated basic skills and technical skills training curriculum development method was subsequently named, can proceed
ahead at a speed which will outpace the de-skilling of technical jobs by cognitive robots.

At the present time, the report by Beaudry and colleagues suggests that we are losing this contest, and tens of thousands of college graduates are moving down the occupational ladder and displacing less literate workers into unskilled, poorly paying jobs or out of the labor force altogether.

A Need to “Simultanealize” Adult Basic Skills Education and Vocational Training

Ordinarily, educators are not very interested in making their education programs as efficient as possible, meaning that they seek to get students to their learning goals as rapidly as possible. But for adults in need of basic skills education in hard economic times, efficiency is at a premium. Most of them do not have years of time to build years’ worth of new knowledge and skills so they can then get the job training they need. For the majority of adult learners, time for education is limited. They will want to achieve their learning goals as efficiently as possible. That is why it is desirable for adult educators and vocational trainers to seek ways to combine their programs.

This need for efficiency in adult basic education and vocational training was noted a decade and a half ago by Barbara Garner of World Education, who was later editor of Focus on Basics, the professional development journal of the National Center for Adult Learning and Literacy (NCSALL). Writing about what she called “the simultaneous model of education and training” Garner (1994) stated that:

Quote” Adult education and training providers have historically used a sequential model of program design: adult students who need academic remediation must do that first, then enter skills training programs to gain a vocational skill. Students with less than high school level skills are often faced with spending years in adult basic education and GED
preparation before becoming eligible for vocational training. Needless to say, few students who start with limited academic skills ever make it into vocational training and on to employment. While policy makers complain about the failure of adult basic educators to move their students into skills training, few have questioned the design of the system.

Program planners in the Massachusetts Departments of Education (DOE) and Public Welfare (DPW) conceived of a better way to help motivated students get the vocational training they need. They joined forces to sponsor a pilot project that would test their assumptions. These assumptions were:

• Program design should capitalize on student’s interest in employment.

• Hands-on vocational training is intrinsically more interesting than academic remediation.

• Student’s motivation to learn a vocational skill will carry over into motivation to improve the academic skills.

• Students can learn vocational and academic skills at the same time.

• A program that provides simultaneous basic skills and employment training will be faster than the sequential model.” end quote (p.2)

Garner went on to report on the results of four years of work with the simultaneous model of education and training and discussed the strengths of the simultaneous model:

Quote “The simultaneous model has a number of strengths:

• It is cost efficient in that it takes less time than traditional sequential models

• It capitalizes on participants’ motivation to seek employment
• It enhances the skills of all staff by increasing the vocational training staff’s ability to support the acquisition of literacy skills and the basic skills staff’s ability to support the acquisition of vocational skills

• It gives participants ample opportunity to develop the social skills and other work readiness they need to succeed on the job.

• It is effective in that participants show higher gains in basic skills when the basic skills are linked to vocational skills.”

In times when unemployment and underemployment reaches almost one-fifth of the adults in our nation, adult educators and vocational educators are once again being called on to provide effective and efficient education and occupational training to more rapidly get people into well paying jobs. And this time policy makers have questioned the design of programs for adults.

In this regard, President Obama’s Council of Economic Advisors (CEA) (2009) has called for greater investments in education and training that contextualizes (embeds, integrates, or, adopting and adapting Garner’s term above, “simultanealizes”) adult basic skills with vocational training. Pointing to the state of Washington’s I-BEST program, the CEA stated:

Quote”Another common element of successful programs is that they are based on appropriate curriculum and pedagogy. Washington State’s I-BEST [Integrated Basic Education and Skills Training] program, for example, blends basic skills and occupational training to generate more contextualized learning, where traditionally these have been segregated into distinct programs. The result is a more effective approach to teaching adults who need both basic skills and job skills.”end quote (p.18)

Writing almost a century ago, Cora Wilson Stewart (1922), the founder of the Moonlight Schools of Kentucky wrote
about the benefits of integrated or “simultanealized” basic skills and practical information about farm work, health, and so forth. Discussing the lessons in the Moonlight Schools, she wrote:

Quote”As the lessons progressed, farm improvement, good roads, civics, health, home economics, horticulture, sanitation and thrift were woven into them, and each lesson accomplished a double purpose, the primary one of teaching the pupil to read, and at the same time that of imparting instruction in the things that vitally affected him in his daily life. It was a correlation of subjects which, in adult education is even more necessary than in that of the child.”end quote (p.71)

For those unemployed or underemployed adults in the job market, adult basic skills educators and vocational educators need to forge “a correlation of subjects” and integrate their programs to make it possible for adults to more efficiently get the employment and wages they need for self-sufficiency.
Embedded or Integrated LLN Programs: Another Approach

In February of 2009, the Tertiary Education Commission of New Zealand issued a report entitled Strengthening Literacy and Numeracy: Theoretical Framework. It is one of a series of reports providing guidelines for developing “embedded” programs of LLN.

The report states, “Research confirms that improving workforce literacy, language and numeracy skills works best if the learning is in a context that is relevant to the learner, eg. existing workplace training. The Literacy, Language and Numeracy Action Plan proposes a significant increase in the amount of explicit literacy and numeracy teaching and assessment that is embedded into vocational training” (p. 3).
This recent series of reports from New Zealand take their place alongside a growing number of reports since the beginning of the decade of 2000 that call for and promote the funding of adult LLN programs that integrate or embed the LLN education with programs of job training or vocational education. For an extended review of a number of these reports see Sticht (2005, chapter 1).

Typically, the guidelines for embedding or integrating basic skills education with vocational/job training deal with the redesign of the LLN instruction to support the vocational training, the effectiveness of which is accepted as a given. But, in an earlier report, Sticht (1997) presents a number of case studies of various embedded LLN and workplace or vocational programs. Among these, Chapter 9 discusses Functional Context Education Case Study #3: An Integrated Basic Skills and Electronic Technician's Course. The chapter starts with a fictitious scenario and then describes the actual development of a new prototype integrated vocational and basic skills program. Here’s the scenario (based on real cases):

[Start of Fictitious Scenario]: One day Helen Jones went to ABC'S Inc. and talked with them about getting into their Electronics training program. The in-take advisor asked M. Jones to take some basic skills tests. The Electronics program required 9th grade reading and mathematics skills for enrollment. But Jones had only 7th skills and was advised to go to the basic skills program to raise her skills. She left and never came back.

Their experience with M. Jones lead the ABC'S Inc. staff to wonder why the Electronics program required 9th grade basic skills. After studying the program, they found that it was highly theoretical and abstract. The text for the course was written at the 11th grade level, and there was little emphasis upon learning in a developmental sequence from enactive, to iconic, to symbolic modes of learning.

The ABC'S Inc. staff decided to find out if there were other approaches to Electronics training and they came across a
prototype Electronics course that had been developed in research sponsored by the Ford Foundation. What the Functional Context Education/ Electronics Technician's (FCE/ET) prototype course did was redesign technical training so learners with basic skills at the 5th grade or above could enter directly into technical training. In the context of the technical training, then, their basic reading and mathematics skills were developed to higher levels. [end of scenario]

In this scenario, the part that is of most significance to the present movement into embedded LLN and vocational/job training programs is that the vocational technical training itself was first redesigned to make it accessible to students with literacy skills below what the original course required. Then, reading and numeracy skills were embedded into the redesigned vocational training. The report by Sticht (1997) describes the actual development of an integrated re-designed electronics program with embedded basic skills instruction done in cooperation with the San Diego Community College District.

The lesson here is that adult LLN educators should not take for granted that existing vocational/job training programs are optimally designed and that they, the LLN educators, should work to the requirements of the course. Instead, both the vocational/job training and LLN educators should first focus on how any program that excludes people with LLN below a certain level could first be redesigned to make it more accessible to a wider range of people. After that has been done, and the vocational/job training program has been re-designed, the integration of LLN instruction should be accomplished.

Always, the goal of embedded or integrated LLN and vocational/job training education should be to open up opportunities for people and avoid to the extent possible the exclusion of people due to their basic skills.
Higher Education Credentials, Higher Skills, and Lost Purchasing Power: A Dilemma for Workforce Development Policy and Practice

Not long ago the thinking in the Adult Education and Literacy System (AELS) of the United States was that adults with literacy skills below the high school level and who lacked a high school diploma could enter into ABE (adult basic education), learn enough to work up to ASE (adult secondary education), and then study hard to get a high school diploma or General Educational Development (GED) certificate. That was the end of the education provision in the AELS. In effect, this sequence of ABE to ASE to "graduation" was meant to replicate the K-12 system of the public schools for children. In ABE the adults got primary school and middle school education (completion of the 8th grade) then in ASE they got secondary (high) school education (9th to 12th grades) and then they graduated from high school or its "equivalent" in the case of the GED.

In the last few years this view of the AELS has changed. In many programs it is no longer considered sufficient for the AELS to provide a K-12 "equivalency" education and provide a high school diploma or GED certificate. Instead, many are calling for the AELS to provide a college preparatory education so that AELS students can get their HS diploma or GED and then qualify for and transition into college, and acquire a two-or four-year college degree.

The reason generally stated for wanting to shift the goal of the AELS from the terminal GED to the "transitional" GED is because some labor market analysts think it is necessary for adults to have post-secondary education and a higher education degree of some kind to earn enough to be self-sufficient in today's economy. For adults to meet college entry requirements means that they must perform well above the minimal passing scores for the GED, which have typically been set "...so that about one-third of the norming sample would not meet the passing threshold" (Tyler, 2005, p. 47). In
this case, the "norming sample" refers to high school students who took the GED as part of its development.

The Education/Literacy Skill Trade-Off

The idea that one needs a higher education degree to be successful in today's labor market economy is complicated by the findings by Kirsch, Braun, Yamamoto, & Sum (2007) of the Educational Testing Service. They present data showing that the mean weekly earnings of U. S. full-time employed adults ages 16 and older vary by both education level and Prose literacy level as measured by the National Adult Literacy Survey (NALS) of 1992.

Interestingly, some adults with two year college degrees were earning $386 weekly while some other adults with only 9-12 years of education, and no high school diploma, earned $414 weekly. So in this case adults with less education earned more than those with two year degrees. Why?

The two year degree holders were in NALS literacy level 1, the lowest level of literacy, while those with less than a high school education were in NALS literacy level 3, the mid-level of literacy for adults in the NALS. Here, then, having a higher level of literacy was more important than having completed high school and gone on to post-secondary education and getting a two year college degree. Skill and not education credentials appear to be the factor producing higher income here.

On the other hand, some adults at NALS literacy level 4, the next to the highest level of literacy, earned $493 weekly, while some at NALS level 1 earned $586 weekly. Why? The level 4 literates had only a high school diploma while the level 1 literates had somehow acquired four year or higher education degrees. So a higher education degree for those near the bottom of the literacy scale can offset the benefits of having literacy skills near the top of the scale for those without a higher education degree. Degrees and not skills seem to be in play here.

Real Income and Education Credentials
Barton (2000) reported that more people have completed high school and acquired some college over the last quarter century yet real hourly wages (i.e., adjusted for inflation) for both men and women with less than high school, high school, and some college have declined. For men, even college graduate's real hourly wages declined 4 percent, while for women they increased. Only for those with advanced degrees have real hourly wages increased for both men and women (p. 34).

Kirsch, Braun, Yamamoto, & Sum (2007) present data showing that in constant 2005 dollars ("real income") the mean lifetime earnings of 18 to 64 year old males in the United States has declined from 1979 to 2004, except for those with a Master's Degree or higher. For those men without a high school diploma or GED, the drop in lifetime earnings was -39 percent, for those with a high school diploma but no college, the decline was -29 percent, for those with 1-3 years of college, including an Associate's Degree the decline was -13 percent and for those with a Bachelor's degree the decline was -1.2 percent. For those with a Master's degree, the increase from 1979 to 2004 was +15 percent (Table A12 p. 31).

These data suggest that if more and more men attain higher levels of education, then in wages adjusted for annual inflation from 1979, there is likely to be an additional drop in the lifetime wages for men with education up through a Bachelor's degree. Following this trend, if more and more men attain a Master's degree, then we should observe a decline in the inflation adjusted wages for those men with Master's degrees in the coming years. Presumably, as Barton's (2000) report suggests, as more and more women acquire higher education degrees this will eventually have some deleterious effect on women's real income at higher education levels, too.

These kinds of trade-offs among skills and credentials and their effects on income call for caution in our approach to workforce development policies and practices. We need to make certain that our educational efforts lead to both better skills and higher education credentials for maximum returns
on investments in education. But we also need to be concerned that by enlarging the pool of both a better educated and more highly literate workforce, there are real increases in the economic purchasing power for those who make a considerable investment of time and effort in achieving both higher credentials and higher skills.

Otherwise we run the risk of seeing more and more highly educated and skilled citizens without the capacity for self-sufficiency nor the sustainability of the means of providing not just for themselves but also for their families.

**Are We Educating People Into Poverty?**

**The Workforce Development and Utilization Dilemma**

Adult Education (NCSDAE) published in November 2009 a report entitled: Adult Education: Supporting the President’s Workforce and Graduation Initiatives. The report is introduced with the statement:

**Quote**” In an increasingly competitive world economy, America’s economic strength depends upon the education and skills of its workers. In the coming years, jobs requiring at least an associate degree are projected to grow twice as fast as those requiring no college experience. To meet this economic imperative, President Barack Obama asks every American to commit to at least one year or more of higher education or career training and set a new national goal: by 2020, America will once again have the highest proportion of college graduates in the world. (White House, 2009)” end quote

The report calls for more funding for adult education to help more adults raise their basic skills and complete at least one or more years of post-secondary education.

The same month, on November 2, 2009, the Associated Press presented an article by Kristi Oloffson entitled College Degrees More Expensive, Worth Less in Job Market. She states that, Quote ”Employers and career experts see a growing problem in American society – an abundance of
college graduates, many burdened with tuition-loan debt, heading into the work world with a degree that doesn’t mean much anymore….The problem isn’t just a soft job market – it’s an oversupply of graduates. In 1973, a bachelor’s degree was more of a rarity, since just 47% of high school graduates went on to college. By October 2008, that number had risen to nearly 70%.”

Oloffson goes on to quote a career and education expert at U.C. Berkeley who thinks there are too many weakly skilled students who are getting college degrees. Employers know this and think the college degree is not worth much anymore. Apparently, so do many students. Oloffson reports that the percentage of students saying they will pursue a master’s degree rose from 31 percent in 1972 to 42 percent in 2008.

Consistent with the report by Oloffson, two years ago, on March 2007, I wrote a research note entitled: Higher Education Credentials, Higher Skills, and Lost Purchasing Power: A Dilemma for Workforce Development Policy and Practice. In the note I reviewed research showing that in constant 2005 dollars (“real income”) the mean lifetime earnings of 18 to 64 year old males in the United States declined from 1979 to 2004, except for those with a Master’s Degree or higher. Based on these and other data, I suggested that if more and more adults attain higher levels of education, then in wages adjusted for annual inflation from 1979, there is likely to be an additional drop in the lifetime wages for those with education up through a Bachelor’s degree.

The research on increasing education with decreasing wages in real terms suggests that in these hard economic times, there needs to be major efforts at creating more higher-skilled, well-paying jobs. This is needed so that the supply of better skilled workers that the Adult Education and Literacy System (AELS) helps to transition into post-secondary vocational training or college education does not exceed the number of jobs available that pay family-supporting wages.

Without giving as much attention to how the supply of well-paying, high-skilled jobs can be increased, we may well
achieve the President’s goal that: quote” by 2020, America will once again have the highest proportion of college graduates in the world.”end quote

But even if America’s adults achieve this goal, they are also likely to be among the world’s lowest paid, least self-sufficient, and most government-welfare-dependent college graduates in the world. As I said two years ago, this is truly a dilemma for workforce development policy and practice. We don’t want to educate people into poverty.

**On Workforce Development: Some Puzzling Findings From and For Adult Literacy Research**

Over the years I have found research studies of adult literacy that seem to raise more questions about adult literacy than they answer. Here are some findings from studies of adult literacy from national surveys using literacy tests that I have found puzzling.

**Workforce Literacy**

A number of analyses of standardized and normed literacy test scores has taken place since World War I when the first mass mental testing of adults took place up to the present with both national and international assessments of adult literacy. Across all this time and testing it has repeatedly been found that literacy level is positively related to occupational status and higher income. There are, however, some interesting deviations from these generalities and some data that suggest complications in interpreting these types of studies. Just how does measured literacy ability affect adult workers in their daily lives at work?

Literacy and Occupation. In what occupations do the least literate adults work? It turns out that 53 percent of adults who score at the lowest level of literacy, Below Basic, on the Prose test of the 2003 National Assessment of Adult Literacy (NAAL) occupy "white collar" occupations. This is perhaps
contrary to what might be the stereotype of low literate adults working in farming, construction, manufacturing, maintenance and other jobs frequently thought of as "blue collar" jobs.

On the NAAL survey, the percentage of Below Basic adults working in Management, Business, and Financial occupations was the same (3 percent) as those working in Farming, Fishing, and Forestry. There were four times the percentage of Below Basic adults working in Office and Administrative Support occupations (8 percent), which might be considered as "literacy oriented" jobs, as in Installation, Maintenance, and Repair occupations (2 percent) in 2003.

The greatest percentage of Below Basic adults worked in Service occupations (30 percent), as did 16 percent of adults with Intermediate and 10 percent with Proficient levels of Prose literacy. Of course, the category of "Service" occupations is quite broad and could include some very low literacy demanding jobs as well as some very high literacy demanding jobs. Whatever the case, almost a third of the Below Basic adults have found jobs within this occupational category which is generally thought of as one of the fastest growing categories of work.

Literacy and Income. As a general trend, weekly earnings rise as one's literacy skills increase. However, a high literacy level does not guarantee higher income. In 2003 some 14 percent of adults with Proficient literacy on the Prose scale earned less than $500 a week, or about $26,000 per year.

On the other hand, low literacy does not necessarily lead to a low income. Over 35 percent of adults scoring Below Basic on the Prose scale of the NAAL earned over $500 a week, and almost one in five earned $650 or more per week ($33,800 per year).

Literacy and Job Opportunities. Apparently, even though adults may score poorly on literacy tests like the NAAL, most
do not think of their reading skills as limiting their job opportunities very much. For adults scoring at the lowest level of literacy, Below Basic, on the NAAL Prose scale, 40 percent said they thought their reading skills limited their job opportunities "not at all," 36 percent thought their reading skills might limit their job opportunities "some or a little," and only 25 percent thought their reading skills limited them "a lot."

Aside from research in the military, I have found no research that looks at how well workers having different literacy abilities actually perform critical job tasks in various jobs within different occupational groups.

**The Right to Read and to Work in Nontraditional Jobs for Women**

Each year, during Women’s History Month, we recognize the important contributions of exceptional women to our Nation’s wellbeing. Two exceptional women with whom I have had the honor of working in adult education are Shirley Jackson and Cindy Marano. Both of these women have earned an honored place in the history of adult education as they pursued activities to upgrade the literacy of the Land and enrich the lives and livelihoods of women and their families in the United States.

**Shirley Jackson and the Right to Read (R2R) Program**

I worked with Dr. Shirley Jackson when she was directing the U.S. government’s R2R program within the Office of Education in the U. S. Department of Health, Education, and Welfare (HEW) (Sticht, 1978). One activity of the R2R was the identification of reading education programs demonstrated to be particularly effective. I had directed the development of the Functional Literacy (FLIT) program for the U.S. Army and it was identified as one of only two programs focused on adult literacy education to be considered as “exemplary” by the R2R (U. S. Office of Education, n.d.).
Writing in 1980, Jackson stated: “This is a report on the fifth year of the National Right to Read Program. Beginning with a modest appropriation of $12,000,000 in FY 1975, Right to Read has grown to $27,000,000 in FY 1979. Thousands of people have been helped by this program, but in addition, the Right to Read program has been able not only to focus national attention on the reading problems of our young people and on illiteracy, but also to identify resources throughout the country which can be made available to bring about needed reforms” (Jackson, 1980a, p. iii). End quote

One of the major activities overseen by Jackson in the R2R was the development of Reading Academies serving functionally illiterate youth and adults. In school year 1978-79, Reading Academies received over $4.0 million and served close to 30 thousand youth and adults. In school year 1979-80 some 70 Reading Academies received over $5.2 million dollars to improve youth and adult literacy. Additionally, the federal Adult Education program adopted the Reading Academy approach in reaching some of the least literate adults in its programs (Elbers, 1980).

Following her work on the R2R Jackson went on to direct the National Basic Skills Improvement Program (Jackson, 1980b) and she served in various leadership positions within the Department of Education, including Deputy Assistant Secretary of Education, Associate Director of the National Institute of Education, Associate Commissioner of the National Center for Education Statistics, and Director of Analysis and Data Collection in the Office of Civil Rights in the Office of Education Research and Improvement. As a member of the National Council of Negro Women (NCNW), Jackson contributed to the NCNW mission: “…to lead, develop, and advocate for women of African descent as they support their families and communities.” End quote

Cindy Marano and Wider Opportunities for Women (WOW) Jackson’s concerns for women’s issues were shared by Cynthia “Cindy” Marano, President of Wider Opportunities for Women (WOW).
On January 14, 1992, the late Albert Shanker, then president of the American Federation of Teachers (AFT), published in his New York Times column a piece about research by WOW (Van Fossen & Sticht, 1991) on the transfer of literacy from mothers to their children. Shanker commented that the research indicated that: Quote: "If giving mothers some extra schooling means that their attitudes towards their children's schooling becomes more positive and the child is more likely to learn, we are helping two for the price of one. This is a good use of money in hard times. (And if the extra schooling helps the mother get a job, it's triply good.)" End quote.

The WOW research reported by Shanker involved programs within the National Workforce Network, headed by Marano, which reached over a million women giving employment information, counseling, and job training. Additional research by WOW focused on strategies for achieving economic self-sufficiency. One strategy called for integrating literacy and job skills training to design programs that can help women break out of poverty and reach educational and economic self-sufficiency in a timely manner (Marano, 1992; Sticht & Lancaster, 1992).

Marano left WOW in 1997 and started her own advocacy company in Oakland, California, where she also worked with the Reconciling Program for the LGBT community as an
activist for same-sex marriage. In 2001, she joined the National Economic Development and Law Center where she served as director of its National Network of Sector Partners project aimed at improving economic development and employment opportunities for low-income people, families and communities. Cindy Marano died in April of 2005 and the Sector Skills Academy, of the Aspen Institute, named their Academy classes "Marano Fellows" as a tribute to her.

In 2006, she was recognized as a Women’s History Month Honoree by the National Women’s History Project: Quote “Economic Justice Activist and Public Policy Visionary Cindy Marano worked for 35 years to build a vision of economic equity for women and low-income workers. A brilliant strategic thinker, Marano focused on public policy issues, built legislative and government support, and engaged a network of national, state, and local organizations to help women and low-income workers fulfill their dreams. Many of her policies were adopted into federal law.” End quote

The work of both Shirley Jackson and Cindy Marano to overcome challenges and to bring literacy and improved livelihood to adults, especially women, added to the efforts of many other women who have taken up these challenges. Today there are tens of thousands of women who work in anonymity every day, often under deplorable conditions and circumstances, to help adults gain their right to read, and to bring occupational equity for women seeking a sustainable, self-sufficient income for themselves and their families. During Women’s History Month, we celebrate the lives of these women, too.

Functional Context Education for Workforce Development

In the hills and hollows of rural Kentucky in 1911 there were no lights to help the night-time traveler find the way to a distant school. So the schools operated only on nights when the moon was out. For this reason they became known as the Moonlight schools of Kentucky.
Started by Cora Wilson Stewart, Superintendent of Schools in Rowan County, the Moonlight schools aimed at teaching literacy to the illiterate adults in the county. However there were no readers in print for teaching adult illiterates, and Stewart thought it inappropriate to use the same readers and texts for adults as were used for children in the day school. So she developed the Rowan County Messenger as a newspaper which could be used to teach reading and writing using news about which the adults were interested.

Later Stewart wrote a series of texts for adult literacy learners called the Country Life Readers. In these texts she once again placed the teaching of reading and writing within content areas of interest to the rural populations of Kentucky such as farm improvement, good roads, horticulture, sanitation, parenting, and so forth. She said, "...each lesson accomplished a double purpose, the primary one of teaching the pupil to read, and at the same time that of imparting instruction in the things that vitally affected him in his daily life" (Stewart, 1922, p. 71).

Jumping ahead almost a century, today in the industrialized nations of the world there is an urgent concern for up-skilling
the literacy, language and numeracy (LLN) and vocational skills of under-skilled workforces. International adult literacy surveys showing one- to two-fifths of a nation's workforce with lower than expected LLN skills and an emergent globalization of work with jobs being sent to lower wage nations have heightened the need for effective and efficient ways to help adults up-skill, re-skill and cross-train as jobs shift globally and technologically.

Fortunately, since Cora Wilson Stewart's pioneering work showing how to accomplish "a double purpose" in literacy education, there have been a number of studies that have demonstrated how to apply the same approach to integrate basic skills with vocational skills training. A review of 50 years of research in the U. S. Department of Defense on how to re-design both vocational programs and literacy programs to accommodate less skilled personnel and provide them with job-related knowledge, skills, and literacy was conducted by Sticht, et al. (1987). They found one project showing that in an integrated basic skills and job knowledge program, students made as much or more gain in "general" literacy as was made in general literacy programs that were not job-related. Importantly however, the integrated program made over three to five times the amount of gain in job-related reading as achieved by the general literacy program.

The foregoing review lead to the formulation of Functional Context Education with several principles for creating integrated vocational and basic skills courses that facilitate learning on entry into the course, learning throughout the course, and transfer into the contexts for which the learning is meant to apply. To accomplish these objectives, courses should be developed that:

1. Explain what the students are to learn and why in such a way that they can always understand both the immediate and long term usefulness of the course content (facilitates entry into the course; motivates learning).
2. Consider the old knowledge that students bring with them to the course, and build new knowledge on the basis of this old knowledge (facilitates entry learning).

3. Sequence each new lesson so that it builds on prior knowledge gained in the previous lessons (facilitates in-course learning).

4. Integrate instruction in reading, writing, arithmetic, and problem solving into vocational or technical training programs as the content of the course poses requirements for these skills that many potential students may not possess; avoid decontextualized basic skills "remedial" programs (facilitates in-course learning; motivates basic skills learning; reduces instruction time; develops "learning to learn" ability).

5. Derive objectives from careful analysis of the explicit and tacit knowledge and skill needed in the technical training, or employment context for which the learner is preparing (facilitates transfer).

6. Use, to the extent possible, learning contexts, tasks, materials, and procedures taken from the future situation in which the learner will be functioning (facilitates transfer).

Since the appearance of the review describing the research basis for Functional Context Education (FCE), large-scale efforts to develop FCE courses that integrate vocational and LLN (variously referred to as integrated, embedded, or contextualized programs) have taken place in Australia, Canada, Ireland, New Zealand, the United Kingdom, and the United States. In the UK, FCE integrating vocational and LLN is referred to as embedded LLN. Recent research in the UK has shown that the greater the extent of embedding of literacy into vocational training, the greater the completion rates, achievements of qualifications, and other important outcomes for both literacy and vocational qualifications.
Numerous documents for developing integrated LLN and vocational education are now available on the internet in the industrialized nations identified above (Sticht, 2005).

The many projects integrating vocational and LLN demonstrate that it is not necessary that adults with low basic skills first raise these skills to a level thought necessary to succeed in a vocational course. Instead, by integrating the vocational and LLN education, it is possible to achieve what Cora Wilson Stewart called "a double purpose", adults can improve their basic skills while also acquiring much-needed vocational education.

**Boomerang Brings Déjà Vu: The Rediscovery of Functional Context Education in the 21st Century**

From 1915 to 1917 Cora Wilson Stewart wrote a series of readers for adult literacy learners in Kentucky called the Country Life Readers. In these texts she integrated (embedded, contextualized) the teaching of reading and writing within content related to work, home, and community areas of interest to the rural populations of Kentucky. This included such content as farm improvement, good roads, horticulture, sanitation, voting, and so forth. She said, "...each lesson accomplished a double purpose, the primary one of teaching the pupil to read, and at the same time that of imparting instruction in the things that vitally affected him in his daily life" (Stewart, 1922, p. 71).

Jumping ahead quite a bit, Susan Reid (2007) of Workbase, an organization in New Zealand focused on adult language, literacy, and numeracy (LLN) development of adults, reported that programs have taken place in New Zealand and other nations that integrate the teaching of LLN
with the teaching of vocational, workforce, or other forms of training.

She went on to say what is almost a direct repeat of what Cora Wilson Stewart had said nearly a century earlier, "The critical aspect of integrated literacy is the concurrent development of the two sets of skills together."

Elsewhere (Sticht, 1999a) I have referred to this idea of teaching LLN so that the adult learner develops two kinds of knowledge and skill concurrently, such as learning generally useful word recognition techniques using work-related vocabulary, as providing "double duty dollars." Instead of investing in a literacy program and then a vocational program, you can integrate the two and develop literacy while also developing vocational skills. So you pay only once for the education but get two important outcomes: improved LLN and workforce development.

Sticht, et al. (1987) report research on the Functional Literacy (FLIT) program showing that in an integrated basic skills and job knowledge program, students made as much or more gain in "general" literacy as was made in general literacy programs that were not job-related. Importantly however, the integrated program made over three to five times the amount of gain in job-related reading as achieved by the general literacy program.

The book by Sticht et al. (1987) formed the basis for workshops and presentations on Functional Context Education (FCE) in the U. S., U.K., Canada, and New Zealand. FCE includes a course design principle for integrating basic skills and vocational or other important content areas such as health, parenting, etc. The principles of FCE became the basis for the National Workplace Literacy Program of the U. S. Department of Education. Under that federally-funded program there were numerous demonstrations of integrated LLN and vocational skills education. Sticht (1999b) reports the results of several programs that integrated LLN with job training and also
provides a chapter on methods for evaluating workplace literacy programs based on the requirements of the federal government during the NWLP.

However, aside from the original research on the FLIT program, which was a quasi-experimental research project comparing a general literacy program to a job-related program, there has been very little experimental or quasi-experimental research comparing the integrated approach to more traditional courses of separate basic skills and vocational skills education.

In one quasi-experimental study, Sticht, McDonald, & Erickson, (1998) compared an Electronics Assembly Vocational English as a Second Language (VESL) class which integrated vocational and ESOL together, a Vocational class in Electronics Assembly (no ESOL instruction) and a conventional ESOL class, not vocationally related. In all three courses pre- and post-test data were obtained on a vocational vocabulary test related to electronics training and a general literacy test (the Adult Basic Learning Exam-ABLE). The data showed that the integrated VOCED+VESL program had greater gains on the vocational vocabulary test than either of the comparison groups, as well as a gain rate per 100 hours of instruction some 65 percent higher for general reading (ABLE) than the general ESL program, and over 300 percent greater than the VOCED program.

Casey, et. al (2006), working in the United Kingdom, reported research with 1,916 learners in 79 vocational courses with varying amounts of integrated (what they called embedded) LLN. Using a four point scale courses were rated as non-embedded, partly embedded, mostly embedded, and fully embedded. This provides a form of quasi-experimental design with a treatment group (fully embedded) and three comparison groups. They reported that, "On the embedded courses retention was 16 percent higher. The embedded courses also had higher success rates than the non-embedded courses. For learners on the fully-embedded courses, 93 percent of those with an identified literacy need achieved a
literacy/ESOL qualification, compared to only 50 per cent for those on non-embedded courses " (p. 5). They found similar results for fully embedded numeracy courses.

In summary, at the present time, the Functional Context Education principles, including that calling for the integration of basic skills with vocational, workplace, health, and other important content areas, are supported by close to a hundred years of professional wisdom from Cora Wilson Stewart through the National Workplace Literacy Program of the late 1980s into the 1990s, to the present and the largest body of scientific, quasi-experimental research on adult vocational, English language, literacy and numeracy instruction in the field of adult education. They provide a solid foundation for evidence-based instruction in the Adult Education and Literacy System of the United States and other English-speaking industrialized nations.

In reading the message posted by Susan Reid, in which she explained that Australia has been doing integrated LLN and vocational training since the mid-1990s, I thought that there was something of a boomerang effect going on. The research, concepts, and U. S. government policies of FCE, including principles and methods for integrated workplace and workforce literacy were disseminated out of the U. S. starting in the mid-1970s (see Sticht, 1975) and early 1980s. Now, seven years into the 21st century, they are returning back to the U.S. from Ireland, the United Kingdom, New Zealand, and Australia!

Heide Spruck Wrigley's (2007) message on the NIFL Special Topics discussion list in which she said "In terms of PD [professional development] that focuses on the development of language skills in the context of work or on the integration of jobs skills on the one hand and language and literacy skills on the other, I keep hearing renewed interest in these models from foundations, government agencies, and other institutions."

Reading all this aroused a bit of déjà vu in me. Is it possible that we are getting ready to throw the boomerang of
Functional Context Education for workforce development once again? I wonder how long it will take to come back this time?

Valuing America’s Workforce

Two reports of multi-year research projects, separated by a decade and a half, one using statistical analysis and the other interview and observation methods, produce similar conclusions. Both call for a greater respect for the work that people in service and so-called “blue-collar jobs” do in America to make a living, support their families, and provide for the common good of the Nation.

Concern About Disparaging People’s Competence: (Sticht, et al., 1987)

Cast-off Youth is concerned with the tendency of many to denigrate the “intelligence” and character of young adults with low aptitude scores on the literacy- and numeracy-based Armed Forces Qualification Test (AFQT). In 2006 a New York Times article was entitled “Don’t Dumb Down the Army” when talking about the young adults who score low on the AFQT.

Concern About Disparaging People’s Competence: (Rose, 2004)

The Mind at Work is concerned with the tendency of many to denigrate the cognitive ability of workers such as waiters, assembly line workers, welders, and other so-called “working class” people such as those reported by Rose.
as: “the autoworkers I heard labeled by one of the supervisors as “a bunch of dummies.”” (pp. xix-xx)

Cast-off Youth: Quantitative Research Approach & Goal

Cast-off Youth reports a study of the Defense Department's Project 100,000. It studied the records of some 340,000 undereducated men during the Vietnam War in which the Army brought in 100,000 men a year who were formerly rejected because of low AFQT aptitude scores. The military’s project was called Project 100,000. Robert S. McNamara was Secretary of Defense at the time and he told me that many referred to the Project 100,000 personnel as “McNamara’s Moron Corps”, confirming the tendency to refer to those who score lower on literacy-based, aptitude tests in a derogatory manner, much as Rose found in his qualitative research with “blue-collar” or service workers.

The goal of the Cast-off Youth research was to find out how these men performed in the military and afterwards in civilian life and how the Army trains lower aptitude men to render them competent job performers. We found that more than 85 percent of these “lower mentality” who were all expected to fail, performed their jobs and completed their service with satisfactory or outstanding evaluations.

The Mind at Work: Qualitative Research Approach & Goal

The Mind at Work research used qualitative methods including extensive and intensive interviews, observations, engaging with both those learning a trade and those expert in the work. Rose provided his analyses of the cognitive processes engaged in manual and service work using "the hand and the brain".

In discussing the goal of the Mind at Work research, Rose states: “My purpose in writing the book, then, is to provide an alternative lens on everyday work, to aid us in seeing the commonplace with greater precision. I believe that such a change in perception could contribute to a more accurate portrayal of the full world of work, and could help us think
more effectively and humanely about education, job training
and the conditions in which so many people make a
living.”(p.xxxii)

Similarities Among Conclusions of Cast-off Youth and The
Mind at Work

Both of these research projects studied the job performance of
“unskilled” people working in jobs thought as “low skilled”
or "blue-collar" and found that:

People whom society might consider incapable of complex
thought and as “dummies” in fact learned and performed jobs
using more knowledge and more complex thought processes
than typically imagined.

There needs to be a greater appreciation of the so-called
“manual” and “unskilled” vocational trades and their potential
for human cognitive and affective development.

Society should avoid the sole use of standardized cognitive
test scores to exclude people from opportunities for education,
training, and work.

Policies are called for which encourage greater inclusion into
the mainstream of American life of those marginalized
citizens whom society thinks can be cast off.

Believe in the Power of People to Achieve When Given the
Opportunity

In the conclusion to The Mind at Work, Mike Rose writes:
quote: “If we think that whole categories of people—
identified by class, by occupation—are not that bright, then
we reinforce social separations and cripple our ability to talk
across our cultural divides.” End quote (p. 216)

When I traveled to Washington, DC and reported the findings
of Cast-off Youth about the positive success of the Project
100,000 young men to Robert McNamara 25 years ago in April of 1985 he told me:

Quote” Its an argument that if people are motivated properly and trained properly, they can succeed. This kind of approach shows that there is something that can be done, and that people---individuals in our society---that our society thinks can be cast off need not be cast off!” end quote

Response by Mike Rose

Dear Tom,

This is wonderful. Of course I know your work, and in fact cite you in the notes to The Mind at Work, but I did not know about your Cast Off Youth book. …I am really honored to see my work paired with yours in such a smart way, and in a way that certainly has pertinence for today. Thank you for sending me this.

Mike Rose, Professor
UCLA Graduate School of Education and Information Studies

Response from Margaret McNamara Pastor:

Thank you, Tom, for reminding Americans to value America's workforce. We don't do enough to provide on-going training for all ages. Training is a life line to a relevant and rewarding professional life, to a secure income, and to self-fulfillment and self-esteem. As a country we could do this. Thank you for continuing to write about this.

Margy

Note: Margaret McNamara Pastor is the daughter of Margaret McNamara, a former teacher who founded Reading Is Fundamental (RIF) in Washington DC, and Robert McNamara, who served as U.S. Secretary of Defense, President of the World Bank, and a member of the Board of Directors of the Ford Foundation
References [most of these are available online using a Google search]


Casey, H. et. al (2006, November). "You wouldn't expect a maths teacher to teach plastering...".


Sticht, T. (1983). Literacy and human resources development at work: Investing in the education of adults to improve the


