

THE DOCTRINE OF TRANSFERABILITY

*How Learning Latin Improves Basic Skills in Reading and Writing,
Amongst Other Benefits*

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INQUIRY QUESTION

The question of inquiry for this paper is: How does the study of Latin transfer skills into other academic areas, in particular basic English skills? It includes two parts, a literature review and classroom-based research. The former is a broad survey of the research and literature claiming that learning Latin transfers skills that boost intellectual abilities in areas such as English, math, and historical/cultural understanding. The latter is a study, conducted in the high school Latin course where I was doing my practicum, of the "root-word phenomenon", i.e. how learning basic Latin roots boosts English vocabulary by as much as ten English words per one Latin root.

Learning the Latin language was a core component of the Western curriculum of education from the Early Middle Ages until its steady decline as a core subject at the beginning of the Industrial Revolution. In the not-so-distant past, no person could be considered well-educated without having learned both Latin and Greek extensively from early childhood, and being able to read authors like Vergil, Cicero, Tacitus, Seneca, Plato, Aristotle, Plutarch, and Polybius in their original language. Every generation must decide the course of its society; to change society one must first change the curriculum of education. Consequently, Latin and all of Classical Humanism have been nearly eradicated from the standard curriculum in present times, with only 2% of High School students enrolling in Latin. To what advantage this eradication has been for our society remains yet to be seen. For there is wide speculation that today's educated adult has less of a handle on basic English skills and less of a awareness of the process of historical change that forms ourselves and our society than the average educated adult did 150 to 500 years ago. If these present ills are worthy of correction, if having the means to make sound moral judgments is important, if tradition and history have any value in education (if only to allow the present generation to critically evaluate today's world as a causal process stemming from the actions of the Ancients), then it can and will be argued herein that Latin is a relevant component of the post-modern society's curriculum, and that Latin is not a mere "dead language."

LITERATURE REVIEW

The Doctrine of Transferability is defined as "the widespread belief that Latin in particular (as opposed to the other foreign languages) develops certain skills and habits which aid English vocabulary, reading comprehension, and composition, while at the same time instilling logical thought" (Sussman, 1978). The idea that Latin improves the mind, in particular the linguistic component of mind, can be traced as far back as the Early Modern Period. American Universities

in the 18th and 19th Centuries required extensive training in the classical languages, Latin in particular, because it was widely believed that learning Latin not only was necessary to understanding our Western civilization, but also because it was widely held that Latin was a mental discipline that prepared students with a certain skill set that would foster proficiency in English and inculcate a clarity of thought required for higher thinking (LaFleur, 1985).

The esteem held for Latin as a means towards proficiency in English and a certain moral clarity of thought that was widely believed as necessary for higher thinking began to change with the Industrial Revolution (Barber, 1985). Indeed, the whole orientation of education around the perennial ideals, that is an education which seeks to teach enduring principles of humanity such as ethics, linguistic competence, and political capability was drastically changed with the Industrial Revolution. At this point in history, education changes from teaching the perennial aspects of humanity such as ethics, linguistic fluency, and political cooperation, towards a focus on vocational training.

In this climate where education was valued not because it forms us as humans, but because it forms us as workers, University of Nebraska Professor Grove E. Barber made what is widely recognized as one of the first quantitative studies, which defended Latin as a practical study in 1914. If any subject is to be defended in the educational system of Industrialized America, it cannot lay claims to a perennial human value, but rather such a study must show how it can help people get jobs and advance through promotions: “Today knowledge is valued for its direct application to a profession” (Barber, reprinted 1985).

Professor Barber studied the commercial department of the high school in Dorchester, Massachusetts. This department housed approximately half of the schools 1,850 pupils and was designed as a vocational training program to prepare students for careers out of high school in

commerce, sales, and bookkeeping. In the first two years of the curriculum, students are recommended to take two years of Latin instead of a modern language. Teachers casually noted that the Latin students had better English skills, which in turn led to greater success and advancement in the workplace. Consequently, the teachers set out to quantify their observations. Creating two groups of students with equal academic ability, one Latin and another the non-Latin or control group, teachers made five measurements: spelling, use of words in sentences, definitions and parts of speech, meaning of words and spelling, and excellence in vocabulary.

The results were as follows:

	Latin (%)	Non-Latin (%)
1. Spelling	82.5	72.6
2. Use of Words in sentences	57.5	40.6
3. Definitions and parts of speech	69.5	33.3
4. Meaning of words and spelling	57.0	27.5
5. Excellence in vocabulary	36.0	6.8

In every category, the Latin students out-performed their non-Latin counterparts, and not because the better students took Latin, as the two groups were of students with equal ability. The conclusion of the study, was that Latin is valuable as a practical study because the skills learned in Latin transfer to better English skills (Barber, 1985).

It was detrimental to the case for Latin in the modern curriculum that there was not more classroom based research or the sort documented by Barber. Because of a lack of preponderance of proof, Latin as a required school subject came under attack in 1924, a time when it was still required for most college entrance exams (Sparks et al., 1995-1996). Edward Thorndike and others at the fore of the burgeoning Behaviorist movement in education called for the relevance of modern languages and attacked the fundamental principle of the doctrine of transferability, arguing that Latin students were not better at English because of Latin, but because of pre-

selectivity, that is they argued that Latin attracts the brightest students, and it is mere correlation that they excel in English, and no cause of Latin (Sussman, 1978). Ten years earlier, Barber had argued the opposite, making a case for Latin in vocational schools for those who are not college bound.

Over the next four decades Latin would slowly fade from the standard curriculum until it reached its nadir in the 1960's and 1970's with less than 1% of high school students enrolling in Latin (Sparks et al., 1995-1996). This low is commonly attributed to advent of the space age and the launching of Sputnik by Russia. Massive amounts of federal funding went to the sciences to the detriment of all humanities. Linguistic proficiency became a secondary concern when it was staked against national survival in an age of fear. During the post-Sputnik era, with the call for scientific supremacy in education, there is a well-documented concomitant decline in English skills. The scores on the English section of the Standard Aptitude (SAT) test were at their lowest ever (Sussman, 1978).

Educators began to search for solutions. Many turn to Latin as a way to help improve communicative English abilities. The 1970's and 1980's saw an incredible amount of classroom based research conducted, which proved that Latin does boost English skills, not just for the bright and pre-selected, but for average and learning disabled students (Sparks et al, 1995-1996). It was also demonstrated that Latin can be effective not only as a part of the high school curriculum, but even as a part of the elementary and middle school curriculum. Many argued that Latin is best suited for 5th and 6th graders if the aim is to improve English skills (Masciantonio, 1977).

There was a push for a return to Latin in an age where English skills were declining for two reasons. The first argument is that Latin is a root language. Some 50% to 60% of English words

are derived from Latin. When a student learns one Latin word, or one Latin root, that student does not learn one English word, but as many as ten. If there were a mere one-to-one correlation between Latin vocabulary and English, there would be little benefit to Latin. But, consider the Latin word *aqua* (water), this serves as the basis for English words such as aquarium, aqueduct, aquatic, aquamarine, Aquarius, and aquaeous (Holmes & Keffer, 1995). If a student can learn the base word in Latin, this will yield to an understanding of several English words. After only a 6-week computer course that taught students 101 Greek and Latin roots (90 of which were Latin), the test population scored 40 points higher than the control group on the Verbal section of the SAT. It was estimated that the 101 English and Latin roots yielded over 800 English derivatives (Holmes & Keffer, 1995).

The second argument for Latin from an English proficiency standpoint is that its inflected grammar challenges students to step outside of English grammar, and gives them a meta-cognitive view of the possibilities for organization of thought. Though Latin grammar is different from that of English, it invites students to compare and contrast how the systems of thought and speech are organized differently. Students are required to step outside of their understanding of language rooted in rigid word order (Masciantonio, 1977). In addition, because even the simplest Latin is grammatically complex, students often have to be instructed in English grammar before the lesson in Latin grammar can proceed.

During the early 1970's a plethora of evidence was compiled from elementary classrooms that seemed to demonstrate how studying Latin improves English skills. In the public school districts of Philadelphia, Washington, D.C., Indianapolis, East Hampton, Massachusetts, and Los Angeles Latin was taught to thousands of students in the 4th through 6th grades with the belief that it would boost English abilities (Masciantonio, 1977).

In the 1970-1971 school year in Washington, D.C. Latin was taught to over 1,000 inner city 5th and 6th graders, a great many of whom were behind their grade level in reading ability. After one year, researchers compared reading abilities of study groups who entered the year at the same reading level. Students who took one year of Latin were compared to those who took no foreign language and to those who had taken four years of French or Spanish. After only one year of Latin, on average students were five months ahead of those who took no foreign language, and four months ahead of those who had taken four years of French or Spanish at the elementary level (Masciantonio, 1977).

In 1973 at the East Hampton, Massachusetts public school system approximately 450 6th graders received daily instruction in Latin. Pre and post-tests on the vocabulary section of the Standard Achievement Test of these Latin students were compared to 169 sixth graders without Latin. While 17.7% of the control group showed growth of two years or more, 41.1% of the Latin group showed a growth of two years or more (Sussman, 1978).

Similar success was found in an elementary program in Indianapolis, begun in 1973 and continued for three years. The program had two goals:

- (1) Expand the verbal functioning of 6th grade children in English; and
- (2) Broaden their cultural horizons and stimulate interest in the humanities.

While the second objective was not tested, significant results were gathered from the Metropolitan Achievement Test. After the first year of the project, between five months of pre-test and post-test, the Latin group showed the following gains over the control group:

- (1) Eight months on Word Knowledge;
- (2) One year in reading;
- (3) One year and one month in spelling;
- (4) Four months in Spelling;
- (5) Seven Months in Math Computation;
- (6) Eight months in Math Concepts;

- (7) Nine months in Math Problem Solving;
- (8) Five months in Science; and
- (9) Seven months in Social Studies (Masciantonio, 1977).

In every category the Latin group showed more improvement than the control group. Interestingly, some of the highest discrepancies between the Latin group and the control group were in Math (items six and seven). Latin is a discipline which refines logical thinking skills. This emphasis on clarity of thought can be attributed to the gains in math. While math is not taught directly through Latin, certain skills do inhere to Latin, which in turn correlate to success in math. As according to the doctrine of transferability, Latin develops certain habits and characteristics of mind, which lead to academic success in other subjects. As W. Willard Wirtz, former Secretary of Labor, once said, “Latin is a basic trainer in the development of the art of logic and reasoning. In this way it trains us to be better thinkers and clearer thinkers” (Richards, 1969).

Similar results were found in studies done in Los Angeles and Philadelphia during the early 1970’s. In Philadelphia, the Latin group was, on average, one year ahead of the control group in a comparison of pre and post-tests (Masciantonio, 1977). Due to this success, there were 14,000 5th and 6th graders taking Latin in 1978 in the Philadelphia Public School District. One of the rare instances in which school administrators followed gave credence to research (Sussman, 1978). In Los Angeles, the Latin group scored three months above the control group on a pre and post-test comparison (Masciantonio, 1977).

Elementary students are, in recent times, not a group that would be expected to benefit from Latin. But, research has shown the contrary. Sparks et al. (1978) pushed the boundaries even further by testing the benefits of learning Latin that are brought to learning disabled students. Their research found that, when using an approach known as Multi-Sensory Structured Language

(MSL), learning disabled students are able to receive tangible benefits from learning Latin. It should be noted that these benefits did not surpass those of non-disabled learners who received instruction in the traditional method of grammar-translation. MSL combines on aural, visual, phonological, and orthographical approaches (Sparks et al., 1978). While this method was not used in the elementary school studies, it has been argued that it would be suitable. Though it does not tend to lead to future success in Latin or another foreign language, nor to proficiency in reading classical authors, this method was shown to improve communicative English skills (Sussman, 1978).

These studies have shown that Latin can be effective as a means to teach English skills to the learning disabled and elementary students, including those who are below grade level in reading.

But, the typical Latin student now is an intelligent or gifted high school student. Studies and arguments abound that Latin is a good fit for the intelligent, motivated, verbally precocious, and college bound student. Research suggests that if vocabulary development and linguistic competence in English are a desirable gifted program objectives, then Latin would be the logical language choice (Van Tassel-Baska, 1987). Several studies have shown that Latin boosts scores on college entrance exams, performance in college, and vocabulary ability as an adult.

At the University of Illinois in 1975, 400 students took a computer based course in Latin and Greek roots. Attendance was up from 35 the previous year. All of the students who took the course scored higher than they did prior to the course on standardized vocabulary tests (Masciantonio, 1977).

A survey of nine public colleges in Tennessee, conducted in 1985 showed that students who took Latin, French, German, or Spanish in high school performed better than students of equal academic ability, but had taken no foreign language in high school. The study concluded that

Latin had the highest positive correlation with both overall college academic success and with freshman college English grades (Wiley 1985). Latin seems not only to boost English skills, but to provide students with a certain skill set, discipline of mind, and academic rigor that prepares them to succeed in higher learning.

It has been argued that Latin is suitable for the college bound and verbally precocious because (1) as many as 60% of English words are derived from Latin roots; (2) Latin enhances linguistic competence in English and other languages; (3) Latin is complex and logically consistent, making it a suitable challenge for gifted students who enjoy mastering symbol systems; (4) Much of the cultural heritage of the West is rooted in Latin traditions of literature, science, philosophy, religion, art, politics and language; (5) Latin instruction is the verbal analogue to mathematics with its emphasis on the relation of form to meaning (Van Tassel-Baska, 1987); (6) Latin instruction is based on a cumulative organization of logically organized patterns – a good match for highly gifted students seeking an accelerated learning experience; (7) Latin is interdisciplinary – combining English, history, politics, art, and philosophy; (8) Latin produces higher level thinking through constant analogies from contemporary ideas to Roman and Greek thought; (9) Latin develops intellectual habits of the mind and deep analysis; (10) Latin provides a strong base for third language learning, being the root of so many language systems (Van Tassel-Baska, 2004). Because of these reasons, Latin is slowly on the rise again because it is so suitable for precocious students who flourish when they are able to build linguistic competency, analytical & critical thinking skills, and gain a knowledge of the tradition of intellectual heritage (Van Tassel-Baska, 1987). Indeed, there was a 95% increase in students taking Latin from 1993 to 2000 (Van Tassel-Baska, 2004).

There is correlation between the study of any foreign language and English ability. A study of Washington D.C. adults showed a correlation between adult vocabulary level and study of a foreign language. Those with no formal instruction in a foreign language averaged in the 28th percentile on an English vocabulary assessment, while those who have taken a foreign language (including Latin) had an average score in the 58th percentile (Masciantonio, 1977).

All foreign language has been shown to improve English verbal abilities. A 1987 study found that verbal scores for students having taken four or five years of foreign language were higher than scores of students having taken four or five years of any other subject. Math scores were also shown to be improved by foreign language study, with an improvement of 132 point between years two and three of foreign language study. That same study found that Latin and German were at the top of the foreign language group in both verbal and math SAT scores (Cooper, 1987).

In 1980 and 1981 LaFleur conducted a survey of SAT verbal and math scores of students who took the Achievement Test in their particular language of study. The groups were of equal intellectual ability, that is they were all gifted because they were taking the Achievement Test. Perhaps it could be said that the French and Spanish groups had less raw intellectual ability than the other languages because these languages are often started before high school, consequently they are studied longer, and so a group with a wider array of intellectual abilities would pertain to these two languages. The remaining languages were Latin, Hebrew, German, and Russian. In the 1980 study the Latin group scored the highest in the verbal section of the SAT with an average score of 568, and second behind Russian in the math section of the SAT with an average score of 588. Following is a table of the complete results:

	Verbal	Math
Latin	568	588

Spanish	500	539
French	540	566
Hebrew	552	580
German	536	582
Russian	524	599

(LaFleur, 1981a)

A second study of the same nature was conducted in 1981. Again the Latin group was highest on the verbal section and second highest in the math section behind Russian. The average verbal score for the Latin group was 558, a slight drop from the previous year, but was still 134 points higher than the national average of 424. It was also noted that there was a 16% increase from the previous year and a 35% increase over two years of students taking the Latin Achievement Test, as well as a 2.6% increase in College Latin Enrollment from the previous year (LaFleur, 1981b).

Here ends the review of a good portion of the literature proving the Doctrine of Transferability. Latin has been shown to boost English skills, Math skills, and lead to greater success in college. It has been shown that Latin instruction does indeed foster intellectual abilities and habits that extend beyond Latin, and has real practical value for all students, regardless of intellectual ability, college aspirations, or interest in scholarly pursuits.

There is another argument, often cited in the literature of defending Latin's place in the public school curriculum, holding that Latin is valuable, along with the other Classic Humanities, because it is the residual of the cultural heritage of our Western society. – continue the cultural heritage argument. Proponents of the Doctrine of Transferability hold that Latin both enhances English verbal and communicative abilities, and also transfers valuable knowledge of culture, morality, and political organization, which is often ignored in today's public education.

Latin is interdisciplinary. Students who study Latin can learn the great Western cultural traditions of politics, philosophy, history, and literature all while learning the vocabulary and

grammatical structure of the language van Tassel-Baska, 2004). But, perhaps the question might arise: what is the value of the intellectual and moral tradition of the west? Liberal educators often see little value in classical humanism, and as a result it has been pushed to the fringes of public education. This has led to an unconsciousness of the traceable elements through history form the substances of our lives and societies:

The schools and colleges have been sending out into the world people who no longer understand the creative principle of the society in which they must live...who no longer possess, in the form an dsubstance of their own minds and spirits, the ideas, the ideals, the logic, the values, or the deposited wisdom which are the genius of the development of Western civilization. (Freis, 1981)

An education in classical humanism is valuable because it touches on the perennial values of humanity, values which are necessary for a free citizen in a democratic society. For, one who must share in the governance of his society, ought to have a firm foundation of the intellectual tradition that, in large part, established those democratic institutions which all must now maintain diligently.

Richard Freis (1981) argues that we need the Western Tradition in out public education system because as human beings we have no other means of learning but from the past. Our society builds upon preceding generations, and we need this knowledge of the past because it is the foundation upon which we build. The Graeco-Roman tradition is the core influence of thought on the west. By understanding our roots, we understand our personal beings and society as the result of a process the generative and degenerative processes of history. Without a firm foundation in the Western Tradition, we are uprooting our culture system of values, justice, and liberty. But, should our society come to judge the Western Tradition as unjust and oppressive, we still must base this decision on a rational assessment of the past. Far too often, administrators will deem the classical humanities as irrelevant to the principles of modern society, basing their

opinions on a weak understanding of the history of thought in the Western Tradition (Fries, 1981).

CLASSROOM-BASED RESEARCH

METHODOLOGY

This study examined the validity of the “root-word phenomenon” (Holmes & Keffer, 1995), which states that learning one Latin root can boost English vocabulary by up to ten words. In a pre-test students were tested on 16 words derived from roots of vocabulary words in the upcoming three chapters of the curriculum. None of the Latin vocabulary was identical to the English vocabulary in the pre-test. All of the English words were based off of roots of the Latin vocabulary. After the three chapters were completed, students were given the same test as a post-test.

Because the class often discusses English derivatives, particular attention was paid to the derivatives of those words which were on the pre/post test that were covered explicitly in class. It was also noted when there was discussion of derivatives related to the English word on the pre/post, but no explicit mention of the derivative on the test. Finally, it was noted when there was no discussion of any derivatives related to the English word on the test. This yielded three categories of words on the pre/post test – explicit, non-explicit, and unmentioned. There was a category-by-category analysis to examine the students’ ability to identify vocabulary by the Latin root words, especially when the derivative on the test was not explicitly mentioned, or not mentioned altogether.

All of the vocabulary items on the test were chosen for their difficulty. This will allow analysis of the students’ ability to land on the correct definition by examining the Latin roots of

the words. There was an item-by-item analysis to assess which items showed the greatest improvement from pre-test to post-test.

RESULTS

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