This article examines the linguistic benefits of Latin in light of recent research which seems to document the relevance of Latin in building English vocabulary and reading skills. Evidence is cited from eight educational projects in which an experimental group of students taking Latin, and a control group not taking Latin, were pretreated, posttested, and compared with regard to English verbal skills. In each case, the Latin students showed significant gains over the control group. Other studies supporting these findings are cited, as well as projects presently being conducted. These studies yield important pedagogical implications: (1) educational administrators and curriculum specialists should consider the significance of Latin in improving language skills; (2) the language profession should assume the responsibility of disseminating information about this research; and (3) responsible educators should combat the tendency to ignore research data for budgetary or other reasons. (Author)
Tangible Benefits of the Study of Latin: A Review of Research

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ABSTRACT This article examines the linguistic benefits of Latin in light of recent research which seems to document the relevance of Latin in building English vocabulary and reading skills. Evidence is cited from eight educational projects in which an experimental group of students taking Latin, and a control group not taking Latin, were pretested, posttested, and compared with regard to English verbal skills. In each case, the Latin students showed significant gains over the control group. Other studies supporting these findings are cited, as well as projects presently being conducted. These studies yield important pedagogical implications: (1) Educational administrators and curriculum specialists should consider the significance of Latin in improving language skills; (2) The language profession should assume the responsibility of disseminating information about this research; and (3) Responsible educators should combat the tendency to ignore research data for budgetary or other reasons.

Introduction

Eloquent apologiae for the study of Latin, stressing various aspects of its relevance, have been made from time to time. The relevance seems to fall under four headings, viz., linguistic, aesthetic, socio-political, and ethical. The purpose of this article is to examine the linguistic benefits of Latin in light of recent research.

The linguistic relevance of Latin stems from the fact that the English vocabulary that pupils hear, speak, read, and write is derived largely from Latin. The technical vocabularies of such fields as medicine, biology, psychology, chemistry, pharmacology, space science, philosophy, religion,
and law are drawn from Latin. The communications and advertising media are replete with allusions to classical mythology, history, and the Latin language. English literature is frequently modelled on the literature of Creco-Roman antiquity or contains references to Latin and the classical heritage. Latin phrases and quotations occur in everyday life. The languages used today in many countries in Europe, Latin American, Africa, and Asia likewise bear the strong imprint of classical influence.

Lexically, Latin has much in common with English and can be used as a valuable instrument for building the English vocabulary of students. Latin roots, prefixes, and suffixes may be keys for unlocking the meanings of English derivatives and cognates. A pupil who knows the meaning of the Latin word *aqua* (water) finds such English words as *aquarium*, *aqueduct*, *aquatic*, *aquamarine*, *Aquarius* and *aquaeous* easier to understand. Structurally, Latin is very different from English in that it is highly inflected and does not have the rigid word order requirements of English. 'Latin works' differently from English and thereby affords Latin students the opportunity to step outside of their own language and acquire a *Sprachgefühl*—a linguistic instinct—that is helpful in using English.

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The three major findings of the evaluation were:

1. Performance of Latin pupils on the Iowa Vocabulary subtest was one full year higher than the performance of matched control pupils.
2. Latin pupils achieved mastery of the course content in Latin language skills, knowledge of classical culture, and English vocabulary.
3. The survey of pupils, parents, principals, and classroom teachers showed that the Latin program had wide acceptance and support.

Indianapolis

Another such study involved the elementary school Latin program in the Indianapolis Public Schools. In the summer of 1973, the Indianapolis Public Schools received a Title III ESEA grant to develop a three-year project predicated on the hypothesis that English language skills and control of syntactic structures can be measurably improved through participation in a specially designed Latin FLES program stressing the importance of Latin root words. Rita Sheridan, the Supervisor of Foreign Languages, was the project director.

The general goals of this project were to assess whether or not the study of Latin and classical civilization would:

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

The project involved approximately 400 sixth-grade students in six schools. Two additional schools with a total of approximately 100 sixth-grade students were selected as control groups. All participating students were studying Latin and classical civilization in a program coordinated with work in their regular classes. There was a thirty-minute lesson each school day taught by a Latin specialist. The complete battery (Form H) of the intermediate Metropolitan Achievement Test was used as a pretest in October 1973, and Form F was used as a posttest in March 1974.

At the end of the first year of the project, the experimental group showed within the five-month period between the pretest and the posttest a gain over the control group on the following subtests of the intermediate battery of the Metropolitan Achievement Test:

1. Eight months on Word Knowledge;
2. One year in Reading;
3. One year and one month in Language;
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.

Results for all three years of the study were similar. In the evaluation of the 1975-1976 school year, the pretest showed no significant differences between the experimental (i.e., Latin) group and the control group in the areas of Word Knowledge, Reading, Language, Math Computation, Math Concepts, and Math Problem Solving. The control group did, however, surpass the experimental group by six months in the Spelling pretest. The posttest indicated that the Latin students surpassed the control group in all areas, including Spelling, by a substantial number of months, and in the Language test by a full year. Fifth- and sixth-grade classroom teachers were asked to write comments about the Latin program as part of the evaluation; these comments were in general very positive. Criterion-referenced tests indicated that the Latin students had mastered the content of the curriculum. The Indianapolis Public Schools plan to make the elementary school Latin program operative in all elementary schools in the fall of 1977 in view of the proven effectiveness of the
program in upgrading basic skills of urban pupils of all backgrounds and abilities.

District of Columbia

Another study involved the elementary school Latin program in the public schools of the District of Columbia. Latin was found to boost pupils' reading scores. The study, conducted during the

The Latin students in Indianapolis surpassed the control group in all areas by a substantial number of months, and in the language test by a full year.

1970-71 school year, involved 1,132 pupils in eleven public elementary schools and tested three hypotheses:

1. There are no significant differences in the reading achievement scores of a sample of sixth-grade students receiving Latin instruction and students taking no foreign language instruction.

2. There are no significant differences between the reading achievement scores of sixth-grade students receiving French or Spanish instruction and students taking no foreign language instruction.

3. Reading achievement scores of students taking any kind of foreign language instruction do not differ significantly from each other.

Using English reading achievement scores in vocabulary, comprehension, and total reading as the basis of analysis, the students with Latin (ten classes) were found to be five months ahead of students receiving no foreign language instruction. Comparison between the French-Spanish classes (ten) and the non-foreign language classes (twenty-five) revealed a four-month edge for the

The students with Latin in the District of Columbia were found to be five months ahead of students receiving no FL instruction.

As a study of the fifth- and sixth-grade Latin program in Easthampton, Massachusetts, seemed to substantiate the findings in Philadelphia, Indianapolis, and Washington. A Latin program for fifth and sixth graders at the Park School in Easthampton was initiated by the Classics Department of the University of Massachusetts and the local public school district. The purpose of the program was to stimulate and strengthen the students' reading skills in English—many of whom read below grade level—and to provide cultural enrichment. Two hundred and fifty pupils in nine classes received twenty minutes of instruction daily. Activities included conversation in Latin, word games on English derivatives, constructing models, and producing Latin plays based on mythology.


5. Rudolph Masciantonio. "In the Schools," Classical World, 65 (1973), 444; also, personal correspondence with Lorilei Burns, who conducted the research in cooperation with the University of Massachusetts at Amherst.
For evaluation purposes, pre- and posttests of the Vocabulary Section of the Stanford Achievement Test were administered. The scores of the Latin pupils (experimental group) were compared with the scores of the previous sixth-grade class, which did not have Latin (control group). Latin pupils showed marked improvement in all six categories evaluated, e.g., eleven percent more than the control group scored above grade level, and twenty-four percent more than the control group showed more than two years' growth. Despite the success and popularity of the program, the local school district was unwilling to absorb the cost of the program when special funding ended.

Erie County

A study at North East High School in Erie County, Pennsylvania, looked at the effect of Latin on College Entrance Examination Board scores, English grades, and vocabulary growth. Students at this school are drawn equally from urban and rural areas; 152 pupils were selected at random for the study. The experimental group (Latin pupils) was matched with the control group (pupils not studying Latin) in terms of I.Q. and grade level. Performances were compared in the following areas:

1. The School and College Ability Test--Verbals;
2. The College Entrance Examination Board Scholastic Aptitude Test;
3. Grades in the two most recent semesters of English; and

Comparisons between the two groups showed that a background in Latin was an aid to higher scores in all areas listed. The study of Latin contributed to better performance on tests in vocabulary and verbal ability, and in higher grades in English. This Latin program is ongoing at the time of writing.

Alexandria

A Latin pilot study at the elementary school level was initiated by the Alexandria (Va.) City Public Schools in 1972-73 and continued into 1973-74. The project, under the Pilot Studies Program of the Virginia State Department of Education, received matching funds and technical assistance through the Department's Division of Education Research and Statistics. The purpose of the project was to increase the English reading skills of pupils. One teacher served in two elementary schools.

Control groups in two comparable schools not having Latin were set up. Experimental (i.e., Latin) and control groups in grades 5 and 6 were pretested and posttested with the SRA (Science Research Associates) Assessment Survey: the Gates-MacGinitie Vocabulary, Comprehension, Speed, and Accuracy Tests; and the Slosson Oral Reading Test. The experimental group did perform better than the control group on the Slosson Oral Reading Test in the posttest. No other statistically significant differences were observed between the control and experimental groups in the posttests. The small size (eighteen pupils) of the control group (caused by massive school reorganization during the study to achieve racial


integration), the difficulties involved in adjusting to a new school environment on the part of some students, and the reassignment of classroom teachers, administrative personnel, and pupils caused the researchers to call for further study under better conditions. Evaluations of the program made by the pupils themselves, their parents, classroom teachers, consultants, administrators, and State Department of Education personnel were very positive. The local school district, however, did not continue the program.

Los Angeles

A recent study evaluated the Los Angeles Unified School District's elementary school Latin program in terms of its English reading vocabulary and comprehension objectives. The Latin program began in 1975 in two schools and was expanded to thirty schools with a Title III ESEA grant in 1975-76. The program—called the Language Transfer Project—was initiated under the direction of E. Jules Mandel, Foreign Language Instructional Specialist. Daily Latin instruction is presented by fifth- and sixth-grade teachers for twenty minutes as part of the language arts bloc. The program was expanded to include more classes in the 1976-77 school year. Most of the fifth- and sixth-grade teachers have a background in Latin or another foreign language and are given special inservice training to teach Latin. They are also given carefully structured curriculum materials to use and frequent supervisory service.

A pretest-posttest design was employed with the Comprehensive Test of Basic Skills. Comparison groups were also pre- and posttested. Objectives relating to vocabulary, word analysis, and other language and cultural concepts were assessed with criterion-referenced tests. Differences in scores were tested for significance, where appropriate. Self-concept was assessed with the Far West Regional Laboratory Self Concept Scale in a posttest-only design. Differences in mean scores between target and comparison groups were tested for significance. Student interests and attitudes were assessed with rating scales.

At the fifth-grade level, the mean gain in vocabulary of target students was eight months; the comparison group's gain was six months. At the sixth-grade level, the mean gain of target students was nine months; the comparison group's gain was six months. The scores of the target-group students on criterion-referenced tests of word origin and Roman history and culture indicated mastery in these areas. The self-concepts and interest in language study were significantly higher for target students than for comparison pupils. Rating by target students indicated high interest in the project. Researchers concluded that the project was successful in improving the reading vocabulary and comprehension scores of target students by more than one month for each month of instruction. The project was successful in improving student knowledge of word origin, Roman history and culture, and structural analysis skills. The project was effective in increasing the self-concept and interest in language study of students. The Latin program in Los Angeles is ongoing, and there are plans for expanding it.

Worcester

Seventh-grade children in the Providence Street Junior High School in Worcester, Massachusetts, have shown dramatic improvement in
their English vocabulary and reading comprehension scores as a result of participation in an innovative Latin program began in 1975. Children with reading scores at the 4.5 to 5.5 grade level in September 1975 increased their vocabulary scores by fourteen months and their reading comprehension by nineteen months in one school year. Generally, students this far behind would be expected to progress about six months. The Latin program attempts to give students a feeling for myth and poetry, as well as to interest them in the study of etymology.

Two groups were selected from the incoming seventh graders. The pilot group took Latin five times a week, and the control group followed the regular program without Latin. Pupils were selected at random from those scoring 1.5 to 2.5 grades below reading level. Letters explaining the goals and objectives were sent to the parents of the pilot group. Leo Glennon, supervisor of the testing program for the Worcester school system, developed a pre- and posttest program for the course. Pilot-group pupils outstripped their counterparts in the control group by eight months in vocabulary scores and by thirteen months in reading comprehension scores.

Pilot-group pupils outstripped the control-group pupils by 8 months in vocabulary scores and 13 months in reading comprehension scores.

Researchers also point out improvement in self-image, motivation, and self-reliance in the pilot group. Research and testing of the program is continuing according to Anita L. Fish, Chairperson of the Foreign Language Department at the junior high school.

A course in the enlargement of students' English vocabulary through the study of Latin and Greek roots and their derivatives was evaluated at the University of Illinois. The course was developed by the Department of Classics out of concern over the national decline in the Scholastic Aptitude Test scores in verbal ability over the past several years. One component of the course makes use of computer-assisted instruction available on the PLATO IV system. Enrollment increased from thirty-five (fall 1974) to over 400 (fall 1975). A standardized vocabulary test is administered before the course begins and is repeated (in another form) at its conclusion. Thus far, all students have improved—some by as much as forty percentile ranks.

Counterparts in the control group by eight months in vocabulary scores and by thirteen months in reading comprehension scores. Researchers also point out improvement in self-image, motivation, and self-reliance in the pilot group. Research and testing of the program is continuing according to Anita L. Fish, Chairperson of the Foreign Language Department at the junior high school.


scored higher than the non-Latin group on the vocabulary test.

Studies designed to show the effect of Latin on basic skills are in progress at this time in the Ithaca (N.Y.) Public Schools and the West Lafayette (Ind.) school system; results, however, are not yet available. Gilbert Lawall, President of the American Classical League, recently appointed a Committee on Latin and the Basic Skills to investigate further the relationship between the study of Latin and the improvement of basic language skills and to disseminate information about available research on this subject. The Committee on Classics in the Great Cities' Schools (which is affiliated with the American Classical League and the Classical Association of the Atlantic States) has been active since 1972 in bringing urban school administrators information about the potential of Latin in improving basic skills.

Conclusion

Important implications stem from these research studies attesting to the tangible value of Latin in building students' English vocabulary and reading skills:

1. Responsible educational administrators and curriculum specialists in 'Latinless' or nearly 'Latinless' schools should consider what Latin could do for their pupils. Such consideration is especially merited in light of the recent concern over basic skills, SAT scores, and functional illiteracy among high school graduates.

2. Efforts to disseminate information about this research on the linguistic relevance of Latin and to implement new programs in light of this research deserve the broadest possible support. The foreign language profession should assume a leadership role in this area.

3. Educational decision-makers sometimes tend to ignore the hard research data they demand for budgetary, political, or other reasons. This tendency is seen in the case of a few of the programs described here which are no longer in existence—despite impressive gains by students. The tendency is unconscionable and should be combated vigorously by responsible educators.

4. There seems to be a relationship between new approaches to the teaching of Latin and the improvement of basic skills. The new approaches sometimes involve multisensory media, structural linguistics, the direct method, programmed and computer-assisted instruction, and attention to the affective domain. They likewise make extension of English verbal functioning a specific goal. In other words, it is not the traditional grammar-translation approach that has yielded the positive results indicated in this article; rather, it is programs that involve radical reform of both curriculum content and instructional strategies.

5. While giving deserved attention to the linguistic relevance of Latin and its new practicality, we should not overlook the substantial aesthetic, socio-political, and ethical relevance of Latin. These other benefits are not readily measurable and observable, but they are very real and important to students.
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The material in this publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Prior to publication, the manuscript was submitted to the American Council on the Teaching of Foreign Languages for critical review and determination of professional competence. This publication has met such standards. Points of view or opinions, however, do not necessarily represent the official view or opinions of either the American Council on the Teaching of Foreign Languages or the National Institute of Education.

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