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RELATIVE SUCCESS *in* CERTAIN
SUPERVISED CORRESPONDENCE
COURSES *of* PUPILS *at* VARIOUS
LEVELS *of* MENTAL ABILITY *and*
READING ABILITY

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PREVIEW

Introduction

During slightly more than forty years formal correspondence courses have grown in favor and general acceptance until now there are approximately one-half million students enrolled in the more than 20,000 well-organized courses available in the correspondence field. There are twice as many students enrolled in correspondence courses as in all the colleges and universities combined.

It has been estimated that the median price of these courses to the enrollee is one hundred twenty dollars. This figure is not so outstanding when one thinks in terms of the tremendous benefits to the student which are mentioned in the advertisements soliciting registrations for some correspondence schools. But this cost to the student takes on a new significance when one learns that according to a certain study nearly forty percent of those individuals investigated who had enrolled in correspondence study "dropped" the course before the end of the first year, approximately seventy-five percent "dropped" before the end of the second year, and that only six percent completed their course.¹

While these percentages of mortality may not be representative of the whole correspondence study field, they do speak of a serious problem. Why do so many correspondence students fail to meet with success in the course for which they enroll? In most cases the initial interest of the student in the course is high. The correspondence student seldom enrolls against his will and often makes deeply-felt financial sacrifices to pay the cost of the course. He enters upon his study of the course with several psychological factors in favor of his success.

The whole problem of success or failure in correspondence work has become of concern to public school administrators with the rapid development and increased use of correspondence courses in school or under the supervision of teachers and officers of the public school. The directly-super-

1. Joffeinger, J. S. "University of Minnesota Report on Commercial Correspondence Schools," *Library Journal*, 1934, 59:398.

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vised correspondence study plan used first, about 13 years ago probably by S. C. Mitchell in Benton Harbor, Michigan, high schools, has grown to national prominence and importance in several centers, most notably through the University of Nebraska, Teachers College Extension Service.

The supervised correspondence study plan in high school provides for the enrollment of high school students in selected correspondence courses the assignments and lessons of which are carried out under the direct supervision of a regular high school teacher or a specially trained supervisor. This plan, while originating in a medium sized city school with the one purpose of providing courses outside the regular curriculum to fit the individual needs of unusual students, has received great impetus during the "depression" years from a wide spread "economy use" in small high schools. Some of these small schools turned to this new method of instruction to satisfy individual needs and needs of whole classes where instructors or courses had been eliminated during retrenchment activities. Finding them apparently successful and highly economical, schools began the use of such supervised correspondence courses as would enrich their meagre curricula. A school might hire one trained supervisor to direct and supervise the correspondence study of one hundred or more students who might be pursuing any number of different courses, thereby greatly increasing the number and variety of courses available to every student and at a cost less than half as great as the cost of similar courses offered in the traditional manner. This supervisor obviously could not have had special training in all of the courses supervised. Therefore such courses to be useful must be largely self-teaching.

This is the condition and type of correspondence courses with which we are particularly interested in this study. We wish to consider the type of correspondence which is offered under supervision, for regular high school credit in the schools of our state. Our discussion will be concerned with the reaction of the fitness of the student to his relative success or failure in this type of study.

It has been suggested that in many cases the educational capacities and experiences of the enrollee are not in keeping with the course pursued. In one recent study¹ it was found

1. Noffsinger, J. S. University of Minnesota Report on Commercial Correspondence Schools. Library Journal, 1934, 59:398.

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that many students were attempting correspondence studies in vocational fields "for which they had little capacity and in only 28.6% of the cases had had vocational experience." However, intelligence tests given in the same experiment indicated that the correspondence students had a mental age higher than the norm for the grade which they had attained in school. In other words, they had the mental ability necessary to pursue further educational work of some sort if it were adapted to their "capacities". Some have recommended that correspondence schools should make use of various vocational tests in order to safeguard the student who wishes to enroll in courses of a vocational nature. These recommendations, however, have met with direct opposition as evidenced in Dr. Lorge's "The Chimera of Vocational Guidance",¹ where the author concludes that "If in spite of proof of the impossibility of vocational guidance, counselors concoct undemonstrable predictions and continue to pretend to wonderful knowledge, they will be charlatans, charlatans no less than the phrenologists who claim to read character." Again, those who advise that the correspondence schools provide the type of guidance conducted by colleges and universities in order to protect their enrollees should be reminded by the words of Dr. Brammel, in the Office of Education Bulletin, 1932, #17, to the effect that 62% of our 517 institutions of higher learning openly advise students "to follow their own interests in selecting their own courses". This would indicate that the practice of the correspondence schools is in keeping with the policy of the majority of advanced schools whether it be good or bad.

All these criticisms of the correspondence schools seem to center about the failure of the schools to measure the ability of the students before enrollment. Such a measure might be highly desirable if possible. However, much of the world's work is carried on by men who would be second or third raters from the standpoint of performance on an "abilities" test in their chosen field. It seems also that there must be points other than general ability which are worthy of our consideration when we are attempting to account for an individual's success or failure in a correspondence course. It has been suggested that certain types of correspondence schools profit most by those who drop out, and purposely fail to maintain

1. Lorge Irving - "Chimera of Vocational Guidance" Teachers' College Recrd, 1934, 35:359-371.

the initial interest of the pupil in the course. Or, failure may be due to the fact that some pupils enroll in courses which can not be mastered without supervision and lacking this supervision they are unable to meet the requirements of the course.

It is the purpose of this investigation to study certain ones of these so-called factors of relative success or failure.

PREVIEW

CHAPTER I

The Problem and Method

Since about the year 1923 there has been a steadily increasing number of students and schools who make use of correspondence study courses as a part of their school program. In many cases the students enrolled in such courses receive regular high-school "credits" for their "extension" course work.

Are these courses to be given to every student who wishes to enroll? Can we tell anything about the probable success of a student in a purely academic course in which he wishes to enroll? It was to gather a small part of the information necessary to answer these questions that this study was undertaken.

Briefly stated our problem was to determine: (a) if there existed any significant relationship between a student's success in supervised study courses and his reading and his general mental ability, and (b) to find the relative success in supervised study courses of students at various levels of mental ability and at various levels of reading ability.

We have taken as our measure of success in the courses studied the difference in the scores made by an individual on two forms of a standard achievement test covering that part of the particular subject field with which the course is concerned, when one form of this test is administered before the student begins his study in the course and the other form is administered immediately after the student has completed the course.

We have taken as our measure of mental ability the results of an individual's performance on two forms of a standard intelligence test. As a measure of the student's reading ability we have taken the results of the individual's performance on a specially selected part of a silent reading test.

By supervised correspondence study courses, we refer to the type of self-teaching extension course which is prepared at a correspondence school center and administered to the stu-

dent by local school officers who provide a special supervisor and maintain certain study facilities as prescribed by the correspondence center.¹

The courses which we have chosen for this experiment were all prepared by the Extension Division of the University of Nebraska and include the following high school subjects⁴: American History, Advanced Algebra, Reading, and English. University of Nebraska courses were selected because of the accessibility of all records pertaining to courses and to students enrolled.

A Description of Procedure

After surveying the courses offered by the extension division, a selection was made of those courses which were representative of the studies commonly found in the curricula of secondary schools and for which easily administered, reliable tests of achievement could be obtained. When the courses to be studied had been determined, the files of the extension division were checked carefully to determine the names of schools which had ordered courses for the coming semester.

After certain schools had been selected in this manner, the experimenters began correspondence with the superintendent or supervisor in these schools who was in charge of correspondence courses². The plan of the experiment was laid before the officials of each school and their cooperation in the experiment was solicited. Schools officially expressing their desire to cooperate were immediately given detailed instructions for participation.

Before study on any course had been started each student was given the specially selected achievement test in the subject of the course and the reading ability test.³ Because of the widely separated locations of the students enrolled, seven persons participated in the administering of the tests. To secure the highest possible reliability of results, all testers followed, verbatim, sets of printed directions for administering each test and endeavored to have the physical conditions of the testing situation such as the room, the time of day, etc., conform as nearly as possible with the suggestions of the experimenters.

1. Appendix 3 (Catalog description of courses.)

2. See Appendix C (Letter Form.)

3. See Appendix D "Description of Special Reading Tests"

4. See Appendix A for a description of the Nebraska Supervised Correspondence Courses.

Within fifteen days after the initial tests were given, the two forms of the intelligence test were administered. A period of at least one day and not more than six days was allowed to elapse between the administering of the two forms of the intelligence test.

As soon as notification was received of the completion of a course a second form of the achievement test for that course was sent, together with detailed instructions for the giving of this test.

All tests were returned to the experimentors for checking and scoring.

Materials Used

The instruments used to determine achievement were in every case carefully selected for validity and reliability at the grade level at which they were to be used¹. In every case the achievement tests were checked by the editor of the course concerned for validity in terms of the objectives of the course. No test was used which did not meet with approval of the editor of the course in this respect.

The following achievement tests were chosen: Columbia Research Bureau Algebra Test, Form B; Pressey-Richards American History, Form A; Iowa Silent Reading Test; Pressey Diagnostic Tests in English Composition.

The initial test of reading ability which was given to enrollees in every course was Part 2 (Word Meaning) of the Iowa Silent Reading Test.¹ This test was chosen because use has shown that results of an individual's performance on this part of the Iowa test gives a fairly accurate index to the individual's general reading ability and because it was thought that any complications caused by additional demands for accurate timing in more complete reading tests lessened the comparability of results from the different testers. According to the findings of Jorgenson² the correlation of scores on this part of the Iowa Silent Reading Test with the total score for this test is .891.

To get a measure of mental ability, the Pressey "Classification" and "Verifying" tests were used.³

1. For a description of the Achievement Tests used see Appendix E
2. Jorgenson, A. N. The Validation of the Iowa Silent Reading Tests, Iowa City, Dep't. of Publications, University of Iowa, 1931.
3. For a Description of these tests see Appendix F.

Chapter II

Relationship Between Improvement and Ability Improvement and Mental Ability

Is there any relationship between a student's mental ability and his success¹ in certain supervised study courses?

This study indicates a slight relationship, which does not prove to be statistically reliable, between improvement in the courses studied and the mental ability of the individual pupils. The results indicate for all students investigated a correlation of $.159 \pm .044$ between mental ability² and improvement in achievement test scores over the period of study on the course.

For individual subject matter fields the correlation between success of the student and the mental ability of the student ranged from $-.132 \pm .151$ in language usage to $.363 \pm .064$ in the advanced algebra course. The coefficients of these various correlations are shown in Table 1.

TABLE I
CORRELATION BETWEEN IMPROVEMENT IN VARIOUS COURSES
AND THE MENTAL ABILITY OF THE STUDENT

COURSE	r ³	P. E.	N
American History .....	.103	.091	54
Algebra III .....	.363	.094	39
Reading (Rate and Comprehension) ..	.271	.086	54
Rate of Reading .....	.320	.082	54
Reading Comprehension .....	.118	.091	54
Language Usage .....	.132	.151	19
Grammar	-.065	.153	19
Sentence Structure .....	.117	.149	19
Punctuation .....	.375	.132	19
Capitalization	-.151	.150	19

1. See page 1, definition of success.

2. See Appendix F for description of tests used

3. In determining these coefficients and their probable errors the following formulae were employed:

$$r = \frac{\frac{\sum xy}{n} - \frac{cx \cdot cy}{\sigma \times .\sigma y}}{\sigma \times .\sigma y} ; P. E._r = .67449 \frac{1 - r^2}{n}$$

Throughout the treatment of the data of this study, comparisons of achievement are made on the basis of test scores when individual courses are considered separately, and on the basis of percentile scores in the few places where two or more courses are considered together. The index of mental ability is the individual's highest obtained score on two intelligence tests. There has been some dispute concerning the use of this technique for determining the mental ability of an individual. In this respect we have followed the recommendations of the author of the test used and of some other investigators in this field.^{1, 2, and 3}

For fifty-four eleventh and twelfth grade students enrolled in American History, our study showed a low correlation ($r = .103 \pm .091$), which is apparently unreliable, between improvement in the course and mental ability. See Table 1. Improvement in this course varied from a 18, or a gain in achievement of 18 score points, to -15, which represents a loss in achievement or a lower achievement score after the completion of the course than before starting the course. See Table 2. Obviously these low and negative improvement scores will lead us to question the validity of the tests or the course in terms of the objectives of the course.

1. See for instance, Stenquist "The Unreliability of Individual Scores in Mental Measurements," *Journal of Ed. Res.* Dec. 1921, and Guiler "How Different Mental Tests Agree in Rating Children," *Ede. Sch. Journal*, June, 1922.
2. See "Record and Interpretation" accompanying "Directions for Senior Classification Test", also "Directions for the Senior Verifying Test" by S. L. and L. C. Pressey, Published by Public School Publishing Co.
3. Kreutz, M., "Comment Reminder a l'Inconstance des Tests", *Arch. Psych.* 1934, 24: 227-224.