ABSTRACT
            A series of studies was conducted to determine the
reading and study skills needs of nontraditional students in the
Indiana University-South Bend open enrollment program. An
investigation of reading level conducted with 61 students in
introductory English classes determined that 20% were at the remedial
level in reading and more than 44% were at that level in study
skills: in addition, 6.5% were below the 7.9 grade equivalent in
reading and 4.8% were below that level in study skills. Another study
determined that the average reading level of GED tests was grade 10,
and that they required little in analytical reading and thinking
skills. College textbooks in various subjects were tested for
readability level, and the mean level was grade 12.8. Recommendations
for recruiting nontraditional students include the following:
administer a battery of tests on admission to identify those students
remedial in basic skills so that they may be properly advised, offer
courses in remedial reading and study skills, and establish a minimal
level of competency for admission to the university, as well as a
criterion level for referral to remedial reading. (DF)

MEETING THE READING AND STUDY SKILLS

NEEDS OF NONTRADITIONAL COLLEGE

STUDENTS FOR THE 80'S

E. Marcia Sheridan, Ph.D.
Associate Professor
Coordinator of Reading
Indiana University at South Bend

The author wishes to thank her research assistants,

Barbara Beeson

and

Janis Block

for their help in doing readability estimates.

Post-secondary academic institutions embark on the new decade with some trepidation. All available forecasts warn us of a drop in college enrollments in the immediate future. In Indiana, a state in which only 43% of high school graduates enter college, declining enrollments are especially troublesome. To maintain full utilization of college facilities and faculties as well as to provide higher education to a larger segment of the state's population, nontraditional students are being sought. There is a growing realization, however, that particular kinds of services and courses are needed to meet the academic needs of such students. Evening and weekend classes are offered. Day care is essential. Assessment of academic skills and their remediation become a necessity.

The purpose of this paper is to describe the efforts which were made in an attempt to better meet the needs of the nontraditional student at Indiana University at South Bend (IUSB). A discussion will ensure regarding the means by which we identified the reading and study skill levels of entering freshman, how we determined the minimal competency of students with a GED (high school equivalency diploma), assessed the "real life" reading expectations of our students as well as the reading demands of the average freshman courses.

The nontraditional student entering the university is any person who does not fit the stereotype of the 18 year old high school graduate who attends the university as a full-time student. The preponderance of students at IUSB, a regional campus serving a commuting population, fit the description of the nontraditional

student.   IUSE offers a variety of undergraduate and several mas-
ter's degree programs, and over half of the 6,000 students attend
the university part-time. The average student age is 27, and many
work their way through school. Although high school rank, SAT scores,
and high school counselor recommendations are used in determining
admission for the traditional recent high school graduate, all of
these are waived when considering the nontraditional student or
anyone who has been out of high school for more than two years.
In effect, there is practically an "open admissions" policy for such
students. However, all students must have a high school diploma or
its equivalent.

In order to avoid a "revolving door" policy for students who
lack the necessary skills to survive in college, various divisions
of the university have begun to provide remedial and developmental
instruction in basic skills. The essential realization has been
that recruitment must be followed by retention. The way to accom-
plish this has been to identify students lacking basic skills and
begin to provide services and courses for delivering the necessary
reading, study, writing and math skills. In the reading and study
skills area, we were aware that there is a growing body of research
to support the offering of such courses as a means to improving
retention in college. (Carpenter and Sawyer; Staley and Smyth)

Over the past several years both the departments of English
and Mathematics have instituted various remedial courses for stu-
dents lacking writing and math skills, respectively. Reading and
study skills courses were instituted in the Division of Education
to meet the needs of students who either perceived a need for such

skills themselves, or were recommended to take it based on the advice of counselors. In formulating a program to meet the reading and study skills needs of nontraditional students, we first asked ourselves a number of questions about the range of ability of incoming freshman.

1. How well do our freshman comprehend, and how proficient are they in study skills?

2. What is the reading competency of students who have a high school equivalency degree (GED)?

3. What kinds of reading demands are expected in the "real world" from students who are considered to have the equivalent of a high school education?

4. What level of competency in reading is expected of students in the usual freshman courses?

In order to answer the first question we conducted a pilot study of students enrolled in a required introductory English composition course. We tested students enrolled in morning, afternoon and evening sections of this course with the Stanford Diagnostic Reading Test (SDRT), Blue Level. Of the 61 students enrolled in these sections, there were approximately equal numbers of males and females, with the average student age at 21.2 years. (Students enrolled in evening courses are generally older.) The SDRT provides grade equivalent scores for reading performance, but does not discriminate beyond grade level 13. However, it is able to discriminate at the lower end providing grade equivalent reading scores down to primary grades. We used this test primarily to help us determine the need for reading and study skills classes for students and also to determine the need for instituting remedial classes in reading.

TABLE 1

STANFORD DIAGNOSTIC READING TEST

	Reading Comprehension	Skimming & Scanning
Grade 13 or Above	· 63.9%	41.0%
Grade 11.0 - 12.9	16.4%	14.8%
Grade 8.0 - 10.9	13.2%	39.4%
Grade 7.9 or Lower	6.5%	4.8%

= 61

On the Reading Comprehension section of the SDRT we found that 80.3% of the students had grade equivalent scores at 11.0 or above. We used the classical definition of an older remedial reader -- someone whose reading achievement level is more than two years below their potential. At the college level one would have to assume that the average student should be able to function at the freshman or grade 13 level, in which case persons reading below grade 11 would be in need of remedial help. Thus, almost 20% of the students fit this definition, and could be considered remedial readers.

In the area of study skills, particularly the subtest measuring skimming and scanning ability on the SDRT, 55.8% of the students in the study had grade equivalent scores of 11.0 or better. What this indicated to us was that while only 20% of our sample might be classified as remedial readers in the normal sense, over 44% of the students could be called remedial in study skills.

Particularly troublesome were the findings of small percentages of students who were functioning below the 7.9 grade equivalent level in either reading comprehension or study skills, 6.5% and 4.8% respectively. Admittedly this was a small percentage of students, yet their presence argues for the necessity of determining a minimal level of proficiency, since it is questionable whether remedial reading classes at the college level can assist students so seriously deficient in reading ability.

In order to answer our second question regarding what we could expect from nontraditional students entering the university with the high school equivalency diploma, we took a closer look at the Tests of General Educational Development, the GED. The GED provides at least legal recognition of the equivalent of a high school education, and its presumed competency level. Therefore we conducted an item analysis of all the questions on each of the tests of the GED -- Science, Mathematics, Reading, Writing, and Social Studies -- and selected samples from each of the tests in order to determine their readability level. Fry's Formula was used for determining readability, and Bloom's Taxonomy of the Cognitive Domain was the classification scheme for determining the type of response needed to answer the questions correctly.

SEE TABLE 2

From the analysis of the questions on all of the tests of the GED, the overwhelming majority of the questions asked for responses which were based on the recall of facts or terminology, on the knowledge level; or were questions asking for comprehension, requiring the student to translate, interpret or extrapolate

8

TABLE 2

HIGH SCHOOL EQUIVALENCY ANALYSIS (GED)

READABILITY:	GED Science Test	GED Mathematics Test	GED Reading Skills Test	GED Writing Test	GED Social Studies Test
Number of Samples	6	5	6	3	7
Average Reading Level	10	11	10	7	12
QUESTION ITEM ANALYSIS:					
Number of Questions	60	50	40	80	60
% Knowledge Questions	45%	0%	35%	96%	30%
% Comprehension Questions	48%	90%	65%	4%	70%
% Application, Analysis, or Evaluation Ques.	7%	10%	0%	0%	0%

Information. Rarely were students asked questions which required higher level responses such as applying the information to a new or novel situation, analyzing for relationships or organization, synthesizing or judging using internal or external criteria. All questions on the GED are in a multiple-choice format which undoubtedly constrains this to some extent, though in no way excuses it totally.

With respect to the readability of the test, the average reading level for individual tests ranged from grade 7 on the Writing Skills Test to grade 12 on the Social Studies Test. When the average reading level of all the tests was combined, the average reading level of the GED tests was grade 10.

As we attempted to determine the kinds of reading students entering IUSB with the GED would have been doing, we selected some materials which were used in a nearby Adult Education program, which prepared students for the GED. Materials used in this program included a number of applications and forms which either a high school or college graduate might encounter in daily life. The Fry Formula was again used to determine the readability of these items. The most difficult of the items selected happened to be the application for the Comprehensive Employment Training Act (CETA) program and the Civil Service Examination application. The CETA application was most disturbing in view of the fact that persons recruited for this program are considered the "hard core unemployed" and presumably at least some would be lacking in basic skills.

SEE TABLE 3

Other items selected included various state and federal forms as well as the instruction manual for a grocery chain in this area

TABLE 3

"REAL WORLD" READING DEMANDS

	Number of Samples	Average Reading Level
Comprehensive Employment Training Act Application	3	17+
Civil Service Exam Application	3	17+
Certificate of Title Application (for car)	3	9
Driver's Manual (Michigan 1977)	3	7
1978 Instructions for Federal Income Tax Form 1040	3	8
1978 Individual Income Tax Return (Michigan)	3	12
Kroger Self-Instruction Manual "Grocery Shrink"	3	7

Mean Reading Level = 11+

12

13

While the mean readability level of all these items was grade 11, the high readability of several of the forms suggests a fairly sophisticated reading demand on the high school graduate or the person with a GED.

To answer our last question on how well the university <u>expected</u> freshmen to read, we took a look at the textbooks beings used in various introductory level freshmen courses and used the Fry Formula to determine their readability. One textbook was selected from one introductory course from each department in the university which offered a freshman course during the second summer session, 1979.

SEE TABLE 4

Of the seventeen textbooks sampled, the three easiest text-books to read were found in courses in Mathematics, Philosophy and English. The most difficult were in Communications, Sociology, Chemistry and Earth Science. The mean reading level for all text-books sampled was 12.8. Both the mode and the median were at grade 14.
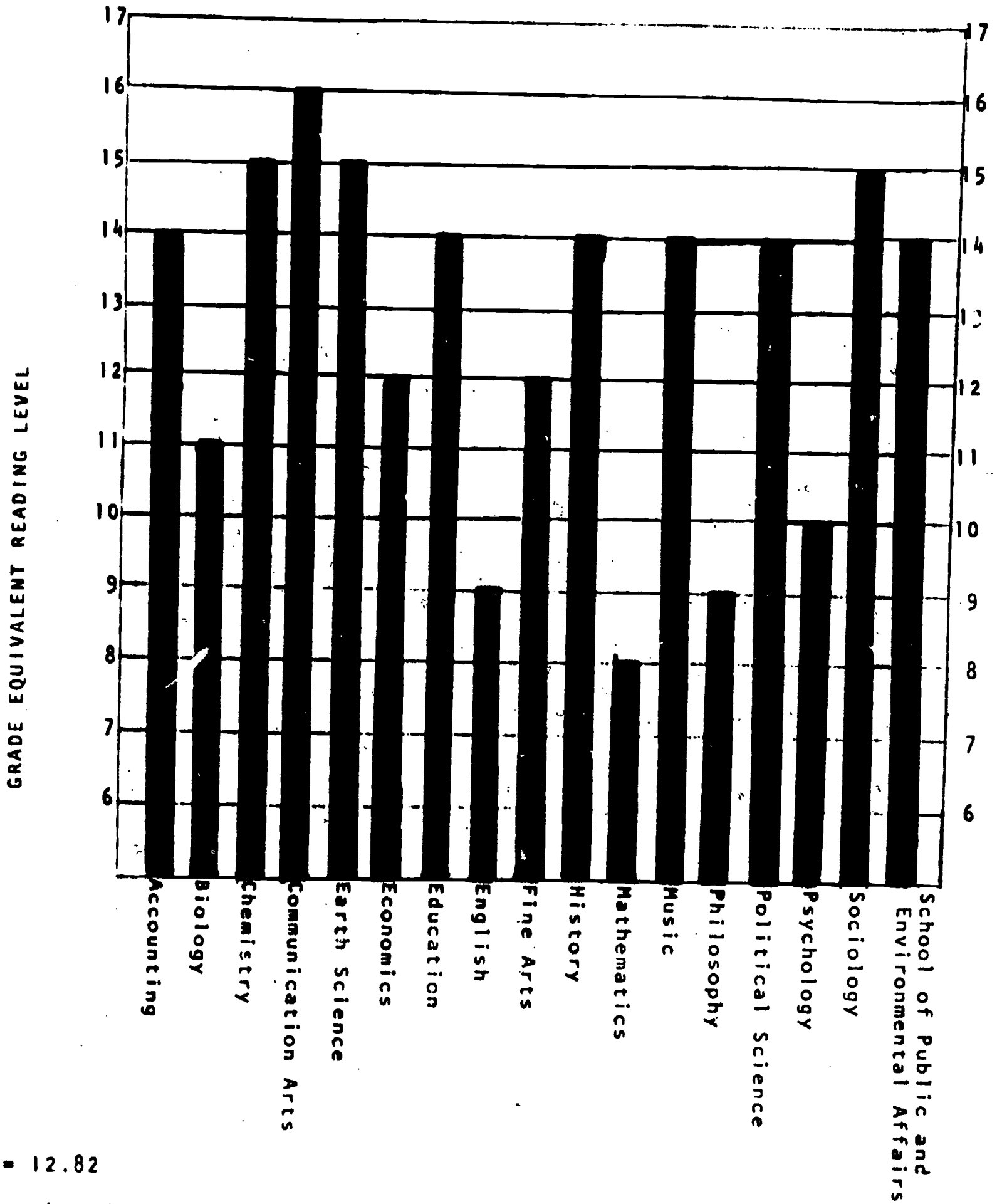
While the average high school graduate should be able to handle the average textbook used in freshmen level courses at IUSB, this theoretical freshman will find half of the books used in intro-ductory courses above his or her reading level. Looked at another way, a little more than a third of the freshmen in the sample had reading comprehension scores lower than the mean reading level of introductory freshman course textbooks.

SUMMARY AND CONCLUSIONS

From our investigations of a representative sample of freshmen enrolled in different sections of an introductory composition course, we found that 20% of these students were remedial readers,

Table 4

READABILITY LEVELS OF FRESHMAN TEXTBOOKS

GRADE EQUIVALENT READING LEVEL

Subject Areas: Accounting, Biology, Chemistry, Communication Arts, Earth Science, Economics, Education, English, Fine Arts, History, Mathematics, Music, Philosophy, Political Science, Psychology, Sociology, School of Public and Environmental Affairs

mean = 12.82

mode = 14

median = 14

15

while over 44% of them were remedial in study skills. Since some students enter the university with the GED, this finding is explained somewhat. The average reading level for the GED test is grade 10, with the reading demand of the GED test requiring little or no analytical reading and thinking skills beyond the ability to know or interpret.

It seems quite evident that the demand of the "real world" reading situations is at or above the level expected from the GED test. This is certainly the case of the reading demand of freshman level courses in the university.

When recruiting nontraditional students for admission to the university even with an "open admission policy," a number of considerations and procedures seem indicated. To avoid the "revolving door" syndrome, some testing on admission to the university is warranted. A battery of tests to identify students remedial in basic skills is necessary to properly advise students. Courses in both remedial reading as well as study skills are essential in addition to courses in writing and math skills.

Because the nontraditional student may not have taken the necessary preparatory classes at the high school level, he or she may be even more deficient than the traditional high school graduate in the kinds of basic reading and study skills essential for survival in college. It seems essential that when identifying students through a testing program, a minimal level of competency for admission to the university be established, as well as a criterion level for referral to remedial reading.

For the nontraditional student entering the university, the need for study skills courses seems particularly evident. However, because of all the intangibles affecting success in college -- self discipline, persistence at task, maturity -- requiring study skills courses is questionable, though recommending them as well as offering them for degree credit appears justified.

An important consideration when attempting to establish a standard for admission into the university regarding the kinds of reading and thinking skills necessary for success in college is that reading is a dynamic process. The nontraditional student who enters the university who is a "reader," has a habit of reading, and uses reading as a tool for learning, may be far "readier" than the traditional high school graduate who doesn't.

BIBLIOGRAPHY

Bloom, B. (ed), _Taxonomy of Educational Objectives_, New York: David McKay Company, Inc., 1956.

Carpenter, T. and C. Sawyer, "The Effect of a College Reading Program upon the Reading Gains Grade Point Ratio and Attrition Rate for High Risk Freshmen," 1971, ERIC Document Reproduction Service, ED# 053 901.

Fry, E., "Graph for Estimating Readability," _Journal of Reading_, Vol. 21, No. 3, December, 1977, page 249.

Karlsen, B., R. Madden, and E. Gardner, _Stanford Diagnostic Reading Test, Blue Level_, Harcourt Brace Jovanovich, Inc., New York, 1977.

Staley, N., and T. Smyth, "An Evaluation of the Effectiveness of a College Reading Program Using Four Criteria," _Reading Research: Studies on Applications_, 28th Yearbook of the National Reading Conference, M. Kamil and A. Moe (eds.), The National Reading Conference, Inc., 1979.

Tests of General Educational Development, GED Testing Service, American Council on Education, Washington, D.C., 1970, prepared by Educational Testing Service, Princeton, NJ.