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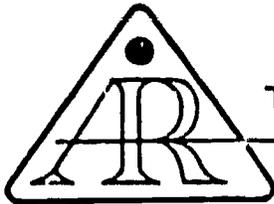
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ABSTRACT

The reading level difficulty of college recruitment literature and the ability of college-bound high school students to understand the terminology frequently used in college admissions were studied. The reading difficulty of passages from catalogs collected from 42 colleges and universities was computed using the Flesch Reading Ease Formula. A College Terminology Quiz and a demographic questionnaire were administered to 206 high school seniors from three schools to evaluate their ability to understand admissions terminology. The reading difficulty of the catalogs was rated as difficult to very difficult, indicating an average reading level appropriate to the advanced college student or college graduate. The average score on the College Terminology Quiz suggested that students had considerable difficulty identifying the correct use of terms commonly found in sections of college catalogs, although students who planned to attend college scored significantly higher than those who did not. The study results indicate that college catalogs are written at a reading difficulty level well above that of the major intended audience and that the students are often unfamiliar with the meaning of the special vocabulary used by those who write admissions materials, suggesting that colleges need to examine their recruitment literature for its level of presentation as well as its content.  
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This paper was presented at the Nineteenth Annual Forum of the Association for Institutional Research held at the Town and Country Inn in San Diego, California, May 13-17, 1979. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of Forum papers.

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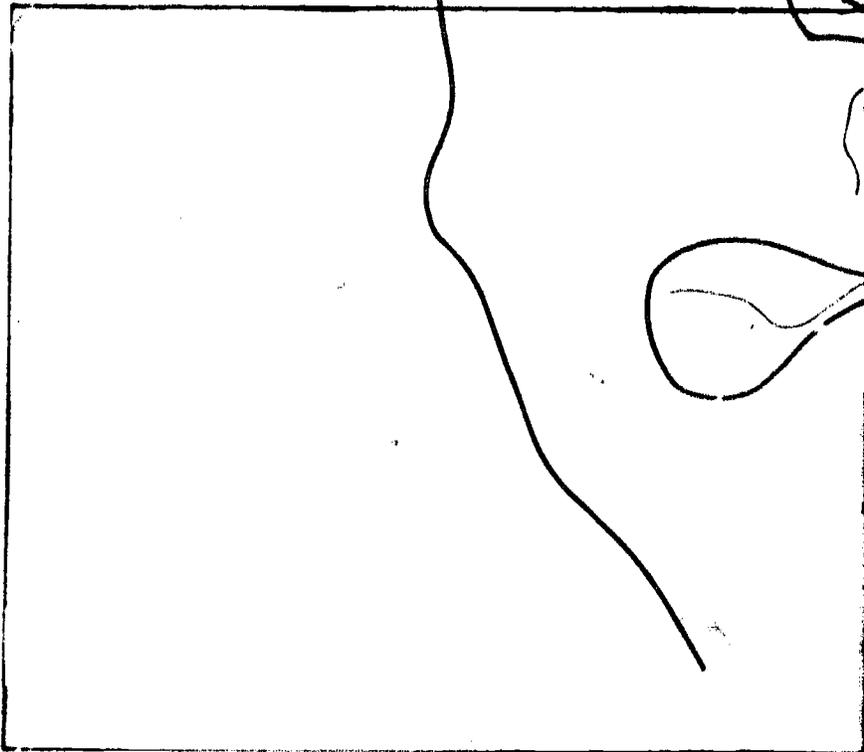
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AN ASSESSMENT OF COLLEGE RECRUITMENT  
LITERATURE: DOES THE HIGH SCHOOL SENIOR  
UNDERSTAND IT?

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FEBRUARY 1979

CENTER FOR HELPING ORGANIZATIONS IMPROVE CHOICE IN EDUCATION

## AN ASSESSMENT OF COLLEGE RECRUITMENT LITERATURE DOES THE HIGH SCHOOL SENIOR UNDERSTAND IT?

The decision to attend an institution of postsecondary education and the choice of the particular institution to attend are two of the most important decisions individuals make during their schooling. These choices are no better than the information on which they are based. In the last few years that information has received a great deal of criticism from both government and the larger public (Stark, 1977; Chapman, 1979). Institutions are under considerable pressure to provide more clear, accurate and complete information to prospective students (Stark, 1977; Stark and Terenzini, 1978). For example, the Education Amendments of 1976 contain "Student Consumer Information Provisions" designed to ensure that accurate and complete information is provided to students about many aspects of the college experience.

Most of the previous research and literature advocating improved recruitment literature has been concerned with particular content that should be conveyed to students or the accuracy of that content that is presented. In many institutions, however, the problem may not be the inaccuracy or incompleteness of catalog information. Rather, the information may be presented in ways that are confusing or not well understood. Yet the appropriateness of the reading level and terminology employed in college catalogs has received little, if any, research attention. While problems in reading level and vocabulary can cause confusion which, in turn, can contribute to inaccurate college expectations among the applicants, problems with the reading level are easily within the capacity of the institution to remedy.

The present study investigated the reading level difficulty of college recruitment literature and the ability of college bound high school students to understand the terminology frequently used in college admissions.

#### METHODOLOGY

Reading Difficulty. During Fall, 1978, forty-two catalogs were collected from a stratified random sample of 44 colleges and universities in the United States. Institutions were stratified by four categories following the Carnegie Council (1973) classification scheme. The categories used were: 1) research universities, 2) comprehensive colleges and universities, 3) liberal arts colleges, and 4) two-year colleges and institutes. The materials from two institutions were subsequently dropped from the study because they had been commercially developed by marketing firms and would not be described as a college catalogue. Thus, forty-two catalogues were actually included in the analysis.

A passage of at least 100 words was selected from each of three sections of the catalogue: 1) academic policies and procedures, 2) admission information, and 3) financial aid information. Within each section, passages were selected randomly.

The reading difficulty of each passage was computed using the Flesch Reading Ease Formula (Flesch, 1951; Smith and King, 1977). This formula is based on words per sentence and number of syllables per 100 words. The Flesch formula was selected because of its reliability and validity at both high school and college levels and because of its ease of application (Smith and King, 1977; Gilliland, 1972, Klare, 1963). It is one of the most widely known and frequently used of all readability formulas (Gilliland, 1972). Klare (1963) provides a good review of the validation studies involving

the Flesch formula. Among other studies, he reports a correlation between the Flesch, the Olemann and Gray-Leary Reading Tests and the Dale-Chall readability formula of .82, .55, and .98 respectively. Klare (1963) also reports studies showing correlations with expert judgement ranging from .61 to .84. The Flesch formula can be easily applied without a computer. A guide for interpreting Flesch scores is presented in Table I. (Note that the lower the reading ease score, the more difficult the reading level of the material.)

Admissions Terminology. During the Fall semester of 1978, 206 high school senior students completed the College Terminology Quiz (CTQ) and a short demographic questionnaire.

The high school students completing the questionnaire were from three high schools which were selected because the teachers were willing to participate in the study. In all cases, the questionnaire was administered by a teacher or the high school guidance counselor. While representativeness of the sample cannot be ascertained, the schools were distributed across urban, suburban and rural settings and across three different states. Table II reports the distribution of students by their plans to attend or not attend college, by whether or not their parents attended college, and by the type of college they expect to attend.

For each quiz item on the CTQ, students were asked to identify the one sentence from among four sentences demonstrating correct usage of the term (examples of items are presented in Figure 1).

The CTQ was developed as a criterion referenced test. A student's score did not depend on how other individuals performed, but, rather, on the proportion of items that the student could correctly answer (Gray, 1978;

Table I.  
Guide for Interpreting the Flesch Reading Ease Score

Reading Ease Score	Grade	Description of Style	Typical Magazine	Syllables per 100 Words	Average Sentence Length
90-100	5	very easy	comics	123	8
80-90	6	easy	pulp fiction	131	11
70-80	7	fairly easy	slick fiction	139	14
60-70	8-9	standard	digests, <i>Time</i> mass non-fiction	147	17
50-60	10-12	fairly difficult	<i>Harper's</i> , <i>Atlantic</i>	155	21
30-50	college	difficult	academic, scholarly	167	25
0-30	college graduate	very difficult	scientific, professional	192	29

SOURCE: from Smith and King, Readability, Ulrichs Book Store, Ann Arbor, 1977.

Table II.

**Reading Ease Scores and Level of Difficulty:  
Means, Standard Deviations, and Grade Equivalents for Catalogs Analyzed**

	N	Reading Text Score X	SD	Grade <sup>a</sup> Equivalent
Total Catalogs	42	33.5	11.2	Upper college- Very difficult
<u>Total Catalogs: Specific Sections</u>				
Academic Policy	42	37.6	16.5	Upper College- Very difficult
Admissions	42	31.8	13.5	Upper College- Very difficult
Financial Aid	42	33.7	15.0	Upper College- Very difficult
<u>Catalogs by Type of Institution</u>				
2 Year Colleges and Institute Catalogs	10	33.6	6.1	Upper college- Very difficult
Liberal Arts College Catalogs	10	40.7	5.4	College level- Difficult
Comprehensive Colleges and University Catalogs	11	35.1	11.9	Upper College- Very difficult
Research University Catalogs	11	25.2	13.3	College Graduate- Very difficult

<sup>a</sup>From Smith and King, 1977. Reading ease score intervals corresponding to grade equivalents are reported in Table I.

## Figure 1

Selected Examples from the College Terminology Quiz<sup>a</sup>

## Directions

This quiz is designed to measure your familiarity with the words often used in describing colleges and college programs. Your scores on this test will not influence your grade in this class in any way. However, it is important that you answer all the questions and do the best you can.

For each item,

CHECK THE SENTENCE IN WHICH THE UNDERLINED WORD(S) IS MOST APPROPRIATELY USED

8. \_\_\_ A. You may transfer credit from college courses you may have audited during high school.  
 \_\_\_ B. If you audit the course, you will not receive academic credit.  
 \_\_\_ C. All graduating college seniors are expected to audit courses.  
 \_\_\_ D. All courses that are audited are accepted for transfer credit.
9. \_\_\_ A. The college is accredited by parents who are dissatisfied.  
 \_\_\_ B. The college is accredited because of failing to comply with state regulations.  
 \_\_\_ C. The college is accredited by the North Central Association of Colleges and Secondary Schools.  
 \_\_\_ D. The college is accredited unanimously by all students that attend.
10. \_\_\_ A. Only students at private colleges and universities have to pay tuition.  
 \_\_\_ B. Graduates of the college are responsible for paying tuition.  
 \_\_\_ C. Full time college students are responsible for paying tuition.  
 \_\_\_ D. While going to public high schools, students are responsible for paying tuition.

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<sup>a</sup>Note: that a correct answer to an item did not necessarily describe all correct uses of the term being tested. However, of the four alternatives presented in each item, only one was correct.

Millman, 1973; Gronlund, 1973). Terms were selected based on their high frequency of use in admissions materials and correct answers were all sentences drawn directly from college catalogs. The items were reviewed for relevance, clarity, and appropriateness by a panel of three researchers with experience in college admissions. Eighteen items were included in the final form of the CTQ.

Identifying an appropriate standard for student performance posed some difficulty. There is no empirical evidence to suggest the level of knowledge of admissions terminology that corresponds to successful adjustment to college. The decision, then, was arbitrary. Ideally, college-bound students should be familiar with all the terminology presented. This level is, however, unrealistic and probably unnecessary. In this study, a standard of 80% was adopted, following the recommendations of Gronlund (1973) and Block (1971).

Analysis. Reading difficulty scores for each of the catalog sections and for the total catalog were compared to national norms (Smith and King, 1977). An analysis of variance was computed to test the significance of differences between types of institutions. When warranted, post hoc comparisons were computed using the Scheffe Test.

Student scores on the terminology test were reported as total number of items correct. Analysis of variance was used to determine if students differing in their demographic characteristics significantly differed in their CTQ scores. Where appropriate, post hoc comparisons were computed using the Scheffe Test.

## RESULTS

Reading Difficulty. Mean reading ease scores by catalogue, section of catalogue, and by type of institution are reported in Table II. The reading difficulty of the forty-two catalogues analyzed was rated at difficult to

very difficult (Table II). The average reading level, then, was appropriate to an advanced college student or college graduate (Smith and King, 1977). No significant differences in reading difficulty among the three sections of the catalogs were observed. Differences in the type of information being presented did not appear to result in differences in reading difficulty. The reading difficulty of catalogs, however, did differ significantly by institutional type (Table III). Research university catalogues were significantly more difficult than those of the liberal arts colleges included in the sample. Relative to national norms (King and Smith, 1977), catalogues from all types of institutions are written at a level too difficult for their clientele. However, relative to other types of institutions, liberal arts colleges appear to be most congruent with the reading ability of their clientele. Catalogues from major research universities were significantly more difficult than those of the liberal arts colleges included in the sample. To the degree that an overly difficult reading level contributes to an incomplete or inaccurate understanding of the institution, students entering research universities may experience the greatest trouble in clearly understanding what they should expect at the institution.

Admissions Terminology. Student scores on the CTQ, as a total group, and separated by differing student characteristics, are reported in Table IV. The highest possible score was 18. As Table IV shows, the average student score was only 10.12 items correct (56.2 percent), well below the 80 percent standard. The average score suggests that students had considerable difficulty identifying the correct use of terms commonly found in sections of college catalogues.

A closer examination of the results showed that students who planned to attend college scored significantly higher than those who did not plan

Table III.

Analysis of Variance of Reading Ease Score by Type of Institution.

Source	d. f.	Sum of Squares	Mean Square	F Ratio	F Prob.
Between Groups	3	1309.30	436.44	4.35	.009
Within Groups	38	3812.31	100.32		
Total	41	5121.60			

**Table IV.**  
**Student Scores on the College Terminology Quiz**

Group	Number of Respondents	Mean	Standard Deviation
All students combined	206	10.12	3.5
Students planning to attend college	168	10.60	3.3
Students not planning to attend college	33	8.20	3.4
Parents did attend college	125	10.74	3.38
Parents did not attend college	74	9.28	3.28
Student expected to attend a			
community college	27	9.89	3.48
4-year private college	30	12.17	2.67
4-year public college	32	10.41	2.88
university	45	10.58	3.24
haven't decided	38	9.55	3.56

to attend college (Table V). The ANOVA yielded an F ratio of 14.04, significant at the .0002 level. Likewise, scores for students whose parents had attended college are significantly higher than it is for students whose parents had not attended college (Table V). This ANOVA had an F ratio of 8.86, significant at the .003 level. Students who desired to attend different types of institutions also differed significantly on their CTQ scores (Table V). Examination of the post hoc comparisons indicated that students who had not yet decided on the type of institution they would like to attend scored significantly lower than students who had cited some preference. Students who planned to attend a liberal arts college scored significantly higher than those that indicated any other preference or no preference. Respondents with brothers or sisters already in college and respondents without did not differ significantly in their quiz scores from those with no siblings attending college.

#### DISCUSSION

The results of this study indicate that college catalogues are written at a reading difficulty level well above that of the major intended audience - the high school senior. This is not surprising, since the individuals who write college catalogues are college graduates. Yet this poses a problem for the prospective student; even if the catalogue provides sufficient and accurate information, the student is apt to have considerable difficulty understanding it. The problem is further complicated since many college bound high school students read below their grade level (National Assessment of Educational Progress, 1975; 1976). Colleges that actively seek to attract students through their recruitment literature may find that even a 12th grade reading level is too high for the intended audience.

Table V.

## Analysis of Variance of Terminology Test Results

Analysis	Source	df	Sum of Squares	Mean Squares	F Ratio	F Probability
Students Differing In Plans to Attend College	Between Groups	1	152.69	152.69	14.038	.0002
	Within Groups	199	2164.52	10.88		
	Total	200	2517.21			
Students Differing by Whether Parents Did or Did Not Attend College	Between Groups	1	99.11	99.11	8.86	.0033
	Within Groups	197	2202.83	11.18		
	Total	198	2301.94			
Students Differing on Preference for Type of Institution	Between Groups	4	128.05	32.01	3.13	.016
	Within Groups	167	1708.92	10.23		
	Total	171	1836.97			

In addition to the reading difficulties discovered in the recruitment literature, students are often unfamiliar with the meaning of the special vocabulary used by those who write admissions materials. The college bound high school seniors in this study did not understand many of the terms used in describing admissions procedures, academic program opportunities, and financial aid. Moreover, these terms were not defined in the catalogues and no glossary was provided. Many of the terms, like "credit-hour", might not appear in a standard dictionary because they have special meaning within the college context.

It is not surprising that students whose parents have attended college are more familiar with admissions terminology than students whose parents did not attend college. However it is interesting that having brothers or sisters in college did not seem to affect student scores. Perhaps the lack of effect is because the siblings are not at home when the high school senior is choosing a college. Another possibility is that siblings share the same confusion about the terms. Indeed, one earlier study has indicated that college students, even in the middle of their freshman year, do not understand much of the vocabulary used to describe college policies (Chapman and Johnson, 1979). Respondents who expect to attend four-year private college seemed to have the best grasp of the terminology. Perhaps students headed toward private liberal arts colleges engage in a broader college search and, in doing so, become more familiar with the vocabulary. Another possibility is that these students, as a group, are different in other characteristics, such as verbal ability, which would account for the difference.

A reasonable question to ask is "Does it matter if the catalogue is difficult reading (or if students do not know what matriculation or credit-hour means)?" It probably does matter in two ways: first, as high school

enrollments drop over the next two decades, competition among colleges for students will increase. It is likely that those colleges that provide straightforward and readable informational material to prospective students will be able to state their case more effectively.

Second, a student's decision about which college to attend is only as good as the information on which it was based. Catalogues are only one of many sources of information. There is evidence, however, that many students do read at least parts of the catalogue (Chapman and Johnson, 1979). It is incumbent upon colleges to provide information that is complete and accurate. Yet, even if the recruitment literature is accurate, the message may be misunderstood if it is written at a level and in a vocabulary too difficult to understand. Results of this study suggest that colleges need to examine their recruitment literature for its level of presentation as well as its content.

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