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TECHINQUES FOR ASSESSING THE CHARACTERISTICS OF CAMPUS ENVIRONMENTS

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In recent years educators have become increasingly aware that many factors beyond the classroom greatly affect the quality of a student's learning experiences at the college level This paper reviews recent attempts to measure and understand factors in the environment which could affect a student's ability to learn It also points out uses for such information in the administration of an institution of higher learning

Although academics have suspected for some time that the peculiar attainments of a college education derive from much more than the classroom relationship between students and teachers, they were unable to substantiate their beliefs in any objective manner until quite recently The studies described in this paper represent the most fruitful attempts to date to measure the characteristics of a campus atmosphere and their impact upon the educational experience of undergraduates

Until the late 1950s educators and the general public accepted the pronounced goals of higher education at face value When studies such as those conducted by Jacob (3) and Eddy (2) cast doubt on the success of attaining several objectives of higher learning, concerned educators initiated more precise methods of analyzing the effects of college environments on the learning process Contributors to *The American College*, edited by Nevitt Sanford (9), strongly suggested that peer groups, faculty-student relationships, housing arrangements, and other aspects of campus life weighed heavily as determiners of behavioural and attitudmal change in young people enrolled in academic institutions

Stimulated by such works, social scientists turned their critical eye upon their own milieu and set out to answer a myriad of questions which could have considerable implications for the future development of higher education and its intellectual claims They hoped to increase their understanding of the workings of a few liberal arts colleges which had spawned a great number of American scholars They wondered why some campuses manifested a much greater respect for property and individual rights and tolerance of non-conformity than did other institutions They puzzled over who determines the effectiveness and prestige of the college—the students with their native ability, or the faculty with their teaching techniques They hoped to provide assistance to applicants in their

search for a college which would enhance their own personal development, since in the past young people relied most heavily on hearsay and superficial impressions in arriving at such an important decision Comprehending the environment and its effect upon students seemed a first step towards answering these and similar questions

THE COLLEGE CHARACTERISTICS INDEX

The collaborative efforts of George Stern (10) and Robert Pace (5) form an insightful approach to understanding the effects of a campus environment on students Drawing upon Murray's concept of environmental press (4), in which the personality needs of an individual are satisfied or frustrated by aspects of his environment, Stern constructed an Activities Index as an inventory of personality needs of college students Carrying this concept further, he and Pace developed a corresponding inventory of campus presses which satisfy the needs of students—the College Characteristics Index The items of this index defined the 'personality' of the college atmosphere in terms of how students see the campus as fulfilling their own personality needs As Pace (6) expressed it, 'a personality need for Order would be suggested by liking such activities as "keeping an accurate record of the money I spend", "arranging my clothes neatly before going to bed", etc An environmental press for Order would be suggested by such features of the college as "professors usually take attendance in class , "in many classes students have an assigned seat", etc (p 74) '

The 300 items of the College Characteristics Index cover eleven factors of the environment aspiration level, intellectual climate, student dignity, academic chmate, academic achievement, self expression, group life, academic organization, social form, play, and vocational climate Responses to these items distinguished between various college climates in several fairly clear patterns, or clusters humanistic, scientific, practical, welfare, and rebellion These five clusters define a profile for a specific campus environment which allows comparison with the corresponding profiles of other institutions Thus, some campuses reinforce a humanistic orientation and do now reward practical or vocational interests, others, the so called 'playboy schools', foster a strong social atmosphere (play) with little concern for academics

Validity for the College Characteristics Index was established by correlating scores on the various factors with other measures of similar qualities The index correlates highly with other measures of intellectualism

such as the Knapp-Greenbaum ratings of intellectually superior schools, the College Entrance Examination tests, the National Merit Scholarship Qualifying Test, as well as measures of PhD productivity.

One limitation critics see in the use of the College Characteristics Index is its dependency upon the personality needs of the student respondents. They argue that the description of the environment is not really objective because of the subjective and personal biases of the student who judges the press of the environment. Thus, their impression of the campus may have limited generalization to a large number of their fellow students. In answer to the question, 'Who makes the college?', responses from the College Characteristics Index, when compared with the Activities Index, indicate that about 30 per cent of the campus environment is perceived as being determined by the personalities of the matriculants. That leaves a rather large portion of the impact of college life up to administrative decisions and the manner in which faculty teach and govern the institution.

THE COLLEGE UNIVERSITY ENVIRONMENTAL SCALES

Because of the limitations of the College Characteristics Index, Pace set out to develop an instrument which would be independent of the personality characteristics of the respondents (7). From a factor analysis of the 300 items in the College Characteristics Index, he isolated 150 statements which successfully discriminated between college environments on the basis of intellectual, social and cultural climate. He utilized an opinion poll technique, not a response to personality needs, which reflected the students' perception of the prevailing campus atmosphere through reactions to institutional rules, procedures, communications, awareness, and controversy, as well as faculty and student interests and involvements. The main dimensions of campus differences as defined by this instrument, entitled College and University Environmental Scales, clustered into five scales: *practicality* ('characterized by enterprise, organization, material benefits, and social activities'), *community* ('a friendly, cohesive, group-oriented campus'), *awareness* ('a concern about and emphasis upon three sorts of meaning—personal, poetic, and political'), *propriety* ('polite and considerate . . . caution and thoughtfulness'), and *scholarship* ('intellectuality and scholastic discipline') (7, p. 11).

Extensive use of the College and University Environmental Scales (distributed and scored by the Educational Testing Service) promoted further refinement of scale items in a second edition in 1969. In the light of

campus disruption during the late 1960s and a revitalized interest in undergraduate teaching, two new sub-scales were developed from existing items—Campus Morale, and Quality of Teaching and Faculty-student Relationships The development of norms for institutions offering masters and doctoral degrees meant that the instrument could be used beyond the undergraduate years

Extensive use of the College and University Environmental Scales has provided information on its reliability and validity A test-retest conducted at twenty-five colleges and universities over a one or two year period showed a difference of three points or less in 80 per cent of 125 comparisons and a difference of four points or less in 90 per cent of the 125 comparisons Validity for the Scale is high when it is compared with other measured characteristics of students and institutions such as those provided by the SAT-Verbal Test and the National Merit Scholarship Qualifying Test

THE INVENTORY OF COLLEGE ACTIVITIES

The investigations of Astin for the American Council on Education offers the most comprehensive data bank dealing with campus environments to date (1) His interest in the importance of campus atmosphere evolved from an original study of PhD productivity of undergraduate colleges Rejecting the practice of evaluating an institution's performance by its graduates, Astin prefers to assess 'residual output', i e , the differences in student behaviour and attitudes which cannot be attributed to their capabilities upon entering collegiate life but must manifest changes resulting from stimuli encountered during their academic experiences Astin (1) defines the college environment as those 'characteristics of the college that constitute a potential stimulus for the student, i e , capable of changing the student's sensory input (p 2)' Measuring these potential stimuli depends upon objective observation rather than the subjective perceptions of students as utilized by both Pace and Stern Astin argues that although a student's behaviour might be altered by his image of the institution, this perception alone does not function as a stimulus for others In the same manner the student's personal characteristics such as intelligence and values do not manifest campus stimuli in Astin's view

Astin's 275-item instrument, the Inventory of College Activities, covers four broad areas of environmental stimuli—peer group, classroom, administrative, and physical To provide further study of environment

vis-a-vis personality characteristics and subjective images of the institution, an additional 128 items complement the inventory Astin, as did Stern and Pace, discovered that with all the similarities of American campus life, great disparities along several indices emerged which determined in large measure the intellectual climate of colleges and universities These measures of campus atmosphere—including academic competition, concern for the individual student, school spirit, permissiveness, snobbishness, athletic emphasis, flexibility of curriculum, and emphasis on social life—clearly indicate the various potential stimuli surrounding the American undergraduate

Astin has contributed significantly to understanding the diversity of American higher education in his studies of the relationships between his dimensions of campus stimuli on the one hand and various other characteristics of higher educational institutions such as geographic location, size, type of control, type of curriculum, racial mix, and sex dominance Such data led to normative profiles of institutions along these various aspects Conventional assessments of the reliability and validity of the Inventory resulted in high indices in each area

THE INSTITUTIONAL FUNCTIONING INVENTORY

A recent approach to the study of campus environment by Teachers College, Columbia University, and the Educational Testing Service involved the development of the Institutional Functioning Inventory (8) Concern for upheaval in many American institutions led the Kettering Foundation to support a study of the factors that lead to innovation in particular institutions whereby new approaches to curricula, teaching, and administration take root more easily than in the vast majority of American colleges and universities The Institutional Functioning Inventory was developed as a measure of institutional 'vitality'—those characteristics of institutions that enable them to implement new and progressive ideas whether they be derived from faculty, students, or research studies

Through item analysis of the Institutional Functioning Inventory, eleven characteristics that lead to change were specified Intellectual-Aesthetic Extracurriculum (IAE), Freedom (F), Human Diversity (HD), Concern for Improvement of Society (IS), Concern for Undergraduate Learning (UL), Democratic Governance (DG), Meeting Local Needs (MLN), Self-Study and Planning (SP), Concern for Advancing Knowledge (AK), Concern for Innovation (CI), and Institutional Esprit (IE) In assessing the environment, the inventory uses both factual questions (such

as 'Students publish a campus literary magazine') and opinion statements (such as 'Most administrators and faculty tend to see little real value in data based institutional self-study' which requires a response of Strongly Agree, Agree, Disagree, or Strongly Disagree) In its approach, it borrows from Astin's objective perception method as well as from the attitudinal survey approach of Stern and Pace

The Institutional Functioning Inventory differs from the techniques previously discussed in several ways First, it is geared primarily to assess faculty views and observations on the assumption that their familiarity with the inner workings of the institution exceeds that of students (As American students delve more deeply into the wells of power on campuses, this assumption may no longer hold) The designers of the inventory opine that student impressions could be tapped in only 72 of the 132 items Despite this designed limitation, the authors allow that students, trustees, and administrators could respond to the inventory and that their impressions of the campus atmosphere when compared to those of the faculty could lead to hypotheses as to why images of the same structure differ among various groups

Secondly, the information gained from the inventory proves most useful in assisting institutional self-study, comparisons with other schools do not seem as important as in the case of techniques which require comparison with national standards for interpretation Basically, the inventory allows an institution to compare its measured environment along the eleven scales with the intended goals and aspirations derived from its educational philosophy, thus, scale averages can be interpreted only in the light of the college's expressed and intended purposes

Because of its recency, data from this inventory is scant, deriving from only seventeen institutions Comments on reliability and validity in the usual sense seem somewhat premature except for examination of internal consistency and construct validity Concerning the former, statistical analyses indicate a high internal consistency on the eleven scales (r-alpha ranging from 86 to 96) Correlational studies to establish construct validity included comparisons with other measures of environment such as the College and University Environmental Scales, demographic data such as faculty-student ratios and number of Merit Scholars, and a national study of campus atmosphere In all instances statistical methods indicated relatively high construct validity for the eleven scales (8) Considering the intended use of the index in institutional research, the standard deviation of responses to a particular scale takes on great importance Consensus among faculty respondents becomes an essential

ingredient for the proper interpretation of the data and the accurate determination of an environmental profile

CONCLUSION

The inventories discussed above have attempted diverse means to quantify as well as qualify the richness or paucity of the intellectual and social environment on college campuses In an area where speculation and assumptions about the impact of the collegiate experience have long held sway, these studies add a more precise analysis of the prevailing psychological press (or potential stimuli) in the culture which surrounds young men and women during their higher education The College Characteristics Index and the College and University Environmental Scales tap student attitudes as the source of opinions, the Inventory of College Activities also makes use of student attitudes but draws upon their observations of factual incidences rather than their subjective judgments of the prevailing atmosphere on campus Combining both methods, the Institutional Functioning Inventory generally ignores students and relies on the staff to define the prevailing psycho-social climate of a specific institution The benefits of such information seem almost endless at this point, since until recent years attempts to alter the learning environment of schools relied heavily on untested assumptions about the prevailing conditions on campus and their effects on the teaching process The analysis and tools cited above provide a more confident basis than has previously been available for the evaluation of the total educational process maintained by a specific institution with respect to presumed goals and objectives and in comparison to similar institutions As such, the diagnostic methods explored by the authors can form an integral and basic component of institutional research, leading to more realistic assessment of an institution's impact on young scholars in a variety of desirable ways beyond the purely academic

Since so much of the effect of a collegiate experience derives from policies and programmes which can be altered by administrative procedures, information about the specific impact of such policies and programmes should lead college officials to alter various facets of the environment so as to increase the possibilities for accomplishing desired goals For example, if an institution's environmental profile indicates a lack of intellectual press, faculty and administrators could stimulate scholarship and intellectual inquiry by sponsoring more individualized instruction and independent study projects and by rewarding such efforts

with honours and campus recognition If the academic climate appears too pedantic and unrelated to the pressing problems of society, efforts can be taken to invite provocative speakers from outside academe to infuse greater awareness of these issues and to create new programmes within the curriculum to answer such needs One rather quick way to alter campus culture lies with the admissions staff If more intellectualism and social awareness is desired, then students with those qualities already in evidence should be admitted in greater proportion than in the past

Campus morale appears to vary with the amount of freedom and opportunity available for students to determine their own life style and academic future Had administrators taken greater pains to understand the student culture on American campuses, violent disruptions might have occurred less often Many officials responsible for student affairs misjudged completely student sentiment in regard to rules which regulated campus life in varying degrees, only to learn of their erroneous assumptions in the face of disruptive protest

Of particular interest to plans for amalgamation of separate and distinct institutions, the study of campus culture can produce insights into numerous issues in need of resolution before such drastic graftings occur Inquiry into the existence of differences in kind and degree between the two institutions can be greatly enhanced through studies of campus culture If academic disparities do not exist, financial concerns might take precedence in the final decision If, on the other hand, significant variances do appear, deliberations must conclude whether these disparities should be preserved to add diversity to a national system of higher education, or whether such differences work against society's goals and should be eliminated through merger One can go further, even to the departmental level Can a department with a specific milieu prosper when transplanted to a campus with unlike or antagonistic environmental press? The instruments and techniques discussed in this article can bring great insight into many areas fraught with emotionalism, misinformation, and self-interest

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