University of Northern Iowa

UNI ScholarWorks

1988

Eco-systems management: Review and implications

Sammie L. Dell
University of Northern Iowa

Let us know how access to this document benefits you

Recommended Citation

Eco-systems management: Review and implications

Abstract

Educational professionals upon registering for the 1986 Student Affairs Institute, being hosted by Iowa State University, in Am.es, Iowa, were presented a button with the following equation B = f(P x E) stamped upon it. Upon inquiry it was found the equation was one developed in part by James Banning, Vice President for Student Affairs, Colorado State University and part of an emerging new approach to providing post secondary student services. The equation translation is that behavior is a function of the interaction of persons and the environment. In regards to post secondary education this relationship is often times referred to as the campus ecology model. According to Crookston (1975), "This approach focuses attention on the interdependent relationships that exist among all parts of the campus environment, including physical structures, organization, and people, and treats as a major concern the effect of the environment on the well being of students" (Evans, 1983, p. 293).

ECO-SYSTEMS MANAGEMENT: REVIEW & IMPLICATIONS

A Research Paper

Presented to

The Department of Educational Administration

and Counseling

University of Northern Iowa

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

by

Sammie L. Dell

July 1988

This Research Paper by: Sammie L. Dell

Entitled: Eco-systems Management: Review and Implications

has been approved as meeting the research paper requirement for

the Degree of Master of Arts in Education.

Jack F. Kimball

June 24, 1988
_____   _____
Date Approved   Adviser/Director of Research Paper

Robert L. Frank

June 27, 1988
_____   _____
Date Approved   Second Reader of Research Paper

Dale R. Jackson

June 27, 1988
_____   _____
Date Received   Head, Department of Educational
                                  Administration and Counseling

Educational professionals upon registering for the 1986 Student Affairs Institute, being hosted by Iowa State University, in Ames, Iowa, were presented a button with the following equation B = f(P x E) stamped upon it. Upon inquiry it was found the equation was one developed in part by James Banning, Vice President for Student Affairs, Colorado State University and part of an emerging new approach to providing post secondary student services. The equation translation is that behavior is a function of the interaction of persons and the environment. In regards to post secondary education this relationship is often times referred to as the campus ecology model. According to Crookston (1975), "This approach focuses attention on the interdependent relationships that exist among all parts of the campus environment, including physical structures, organization, and people, and treats as a major concern the effect of the environment on the well being of students" (Evans, 1983, p. 293).

It will be the intent of this paper to review pertinent literature, present information and reaction to the theory that behavior is a highly related consequence of environment. Also, this paper will speak of the implications for utilization of this theory in a college environment.

A college campus can be a very challenging experience for a considerable number of students. Students must meet academic standards, arrange for their college financing, maintain a personal life, participate in college activities and organizations, develop

a career, just to name a few. Additionally, it has been the general trend in education to aspire and provide support services necessary to ensure the development of the students as a person, as well as a scholar. This cornucopia of academic choices, though seemingly harmless and a positive addition to the collegiate world, does cause a state of what Sanford (1975) refers to as "disequilibrium" (Jacoby, Rue, & Allen, 1984, p. 426) in many students. Students are faced with making money decisions concerning their time in college. Often times there are adequate services offered by a college to support a student in their decision making. But just as often the student and the support system do not interact and a service gap exists. To close that service gap, more attention needs to be paid to the environments in which we dispense support services. Many think this is too radical a departure from traditional approaches to dispensing student support services. Specifically, the traditionalist asserts the victim can be blamed for any service gap (Ryan, 1971). This orientation sets forth the premise that some personal shortcomings on a student's part is the reason for the gap. Focusing on the eco-system/environmental analysis of this service gap illustrates a "system blame" (Conyne, 1983, p. 434). This orientation stresses that some facet of the college's method of delivering support services is faulty. If one adopts the eco-system/environmental analysis, documentation of adequate research to substantiate this

notion of personal-environmental interaction is needed. It is the view of this author that there is a definite relationship. The present studies have only focused on the negative aspects of a college environment, so claims cannot be made that the jury is in on this theory. Nevertheless, enough empirical data has been generated to validate more than a casual relationship.

The interest in this area of behavior and environment has remained fairly constant for the last fifty years. Whatever interest translated into studies and hypotheses have gone from being broad to becoming more narrow. One early hypothesis focused on behavior as a function of the interaction of the <u>characteristics</u> of the person and the <u>qualities</u> of the environment (Lewin, 1936). Present day hypotheses are much more specific. One such hypothesis was presented by Holland (1973), "There exist six such environments that are congruent with six basic personality types (realistic, investigative, artistic, social, enterprising, and conventional) found among the student body" (Evans, 1983, p. 293). There has been a trend to generally postulate that the behavior of college students is a direct function of their relationship with the college environment. Evans (1983) theorized that "the degree to which students characteristics and needs are congruent with various aspects of the environment influences their satisfaction, happiness and achievement" (p. 293). As a statement of its acceptance as a viable student support services mechanism, the Western Interstate

Commission for Higher Education "advocated the establishment of campus design centers where staff would devote full-time attention to the assessment and redesign of campus environments" (Evans, 1983, p. 294).

Further statement of the acceptance of the theory of behavior being the result of interactions between a person and the environment is vested in the range of topics investigated. For example, assessing the total campus environment (Conyne, 1975; Treadway, 1979), environment of a medical school (Heubner, Royer, Moore, Cordes, & Paul, 1979), an academic department (Huebner, 1975), residence hall systems (Daher, Corrazini, & McKinnon, 1977; Schuh, 1979) and a dean of students affairs (Hurst, Ragle, 1979). There is a definite statement being made by researchers, educational theorists, psychologists, sociologists, and the like. There is empirical data which substantiates the premise of a student's perceptions of the degree of satisfaction with the campus environment is related to Milieu management (Crookston, 1975).

A review of the literature also generates evidence of application of behavior-environment theory. One interesting case the literature revealed was utilization of environmental assessment/design approach to make changes in the student services area of Eastern Oregon State University. Changes in environmental design were effectuated in the enrollment services area (catalog and adminstration) and in counseling (location). This is a

functional example of where the conceptual framework of person-environment congruence has been validated and illuminated in the research and application.

There are concerns, though. Nancy Evans of Indiana University identified what is generally identified as friction gaps in the scenario to gain acceptance for person-environment congruence student support services. The focus of the majority of the research is a major cause of this reluctance to accept the theory. The majority of the research conducted has been on issues that have caused friction, anxiety, fear, frustration and the like. All are negative stress factors, and this is a major problem. Giving attention to negative aspects of a student's environment may cause resentment from student affairs staff and administration personnel (Paul & Morrill, 1979). Student services/affairs professional staff types can become very attached to programming they developed, initiated and ultimately are responsible for. When a proponent of the behavior-environment theories has only interacted with student services personnel on negative matters, it often causes strained relations because it is conceptualized the proponent is attacking something very dear to student services personnel. Functionally, this produces administrative gridlock on questions regarding the acceptance and implementation of behavior-environmental theories.

When one couples this negative assessment, defensive reaction scenario, with the nature of the date collected, the problem is

compounded. "Total reliance on perceptual data as a source of information also calls into question the effectiveness of environmental assessment" (Evans, 1983, p. 296). Relying on feelings, perceptions, interpretations, views, opinions, and the like to serve as validity for behavior-environmental theories is faulty. The assessments being rendered in the field all rely quite heavily on subjective responses. These subjective responses are then used as the catalyst for designing changes in the campus environment. There just isn't enough empirical guarantee that opting for the behavior-environment theoretical basis is the correct decision. All things considered, we must integrate these theories into present day student services philosophical and administrative directions. Treating the students as the primary cause of the disequilibrium students experience must be abandoned as sole reason (Sanford, 1975). We must also look at the many physical, administrative, academic, social characteristics of our campus environments as a possible cause of this disequilibrium (Sanford, 1975).

If one accepts the limited validity of doing an environmental assessment of campus and subsequently utilizing what is garnered to implement campus design to facilitate positive behavior-environment congruences, a person must realize that not only environmental indices are effected, but also students' lives. As stated by Conyne and Clack (1981), "Environmental design is a process for

assessing and changing human environment that is intentional,
collaborative, and researchable" (Conyne, 1983, p. 434). Further,
Conyne (1982) identified eight broad areas of this human
environment. These areas are physical settings, academic settings,
social settings, cultural setting, organizational settings,
administrative conditions, basic resources, and ecological climate.
If we as a profession of student services personnel could begin
limited utilization of behavior-environment congruence principles
in only a few of these areas, the number of uncertainties that
students experience would diminish disproportionately.

There are examples of where they have been utilized. Many of
these examples follow the premises set forth in an article written
by Karen J. Winkler in the July 10, 1985 Chronicle of Higher
Education. The examples of utilization of behavior-environment
congruence principles in student support services are best
illuminated by statements of education professionals from this
article. "°You have to look at the non-verbal messages in the
environment,' Mr. Banning said" (Winkler, 1985, p. 11). "°Campus
ecology looks at the total environment in which students live and
learn,' said James C. Hurst, associate vice-president for academic
affairs at the University of Wyoming" (Winkler, 1985, p. 11). "It
is based on the assumption that °what a person does as a thinker is
profoundly influenced by what happens in an emotional and social
setting,' said Clyde Sullivan, director of counseling at Brigham

Young University" (Winkler, 1985, p. 11). So where functional

examples of the application of these theories are to be found, one

also finds strong professional recognition of the role of

environmental factors.

The University of Maryland, College Park has such a program in

place called UMaps. UMaps are a series of six comprehensive guides

to academic, vocational, and cocurricular activities that appeal to

particular types of students (Jacoby, Rue, & Allen, 1984). The

UMaps basic intent is to personalize and network information to

students with the aim of increasing student utilization of campus

support components. In the words of Jacoby, Rue, and Allen (1984)

"the project was designed to make diverse campus opportunities,

options and resources more attractive and accessible to students"

(p. 427). The project at Maryland assumes that students will fit

into at least one of Holland's (1973) six student personality

types. The necessary information to be disseminated to students is

prepared keeping in mind these six types. Attention to graphic

details, color, location of information dissemination sites, size

of paper the information is presented on, are all taken into

consideration. A self assessment instrument is available with the

UMap to aid students in identifying their typology of personality.

This assists the student in selecting the most useful UMap.

Information contained in each UMap covers areas of study, volunteer

opportunities, internships, career possibilities and job

information. It tells the student how they can access support services in each of those areas. The ability to make choices commensurate with the needs, desires, and personality of the student is enhanced. The opportunity for self exploration facilitates knowledge of self, which is a major concern of college students and student services personnel. The ability of the student to make timely choices concerning their academic and personal matriculation/growth is also a major asset of the program. Students being able to make competent decisions about their academic and personal matriculation/growth during their freshman and sophomore years enhances their chances for success later on. Providing this type of direction early in a student's academic career is a boon to all concerned.

The UMap project was also found to have use beyond assisting students in comprehending and functionalizing the complex milieu of campus environments. UMap project personnel found it useful in attracting and recruiting students, as part of the University of Maryland's orientation program and counseling center. UMap was instrumental in providing a quick easy guide for potential students to interpret class options and availability, plus through the self assessment mechanism, be able to match those options and available resources to the personality typology. The literature suggests the utilization of UMap by high school counselors could greatly aid students in assessing whether the University of Maryland is the

place for them. UMaps can assist in orienting new students by meeting three most basic needs: (a) information about the various curricular and cocurricular options available, (b) a sense of belonging, and (c) confidence of an ability to navigate within the new environment (Jacoby, Rue, & Allen, 1984). Being able to offset the negative impact of these factors on both students and service deliverers would be a major accomplishment. It appears that utilization of UMaps basically provides the counselor/advisor with more raw data on the student. Thus the time spent on information gathering, prior to advising or counseling a student, is reduced. This additional time could be spent on enabling, therapy, referrals, and the like. The benefits of the UMaps project have been good. The grouping of the forms of mental health categories, developed by L'abate and Thaxton, (1981) (prevention, mutual help groups, skill training programs, psychotherapy, environmental modification and community efforts) do not preclude the utilization of behavior-environment counseling principles. "Campus environment design, with its person-environment unit definition of the client, represents a viable delivery option for counseling centers that fall well within the above categories" (Conyne, 1983, p. 437).

Whatever component of a college environment chooses to take advantage of environmental design principles, all components benefit. The college environment is much akin to a living mechanism. Due to the complex nature of the delivery of

educational and support services, there is great likelihood that
any change in any department produces change in other departments.
Though the impact of the change will be felt along a continuum;
some are affected more than others. Whatever, there does exist an
interrelatedness on modern college campuses. The issue is not just
one the student service professionals should be concerned about.
The consequences of a student services system operating under
behavior-environment support principles necessitates the entire
school be a part of the integration of such systems into a campus
environment. The UMaps program is a good functionalization of such
a system.

After thinking about these issues, questions rise as to what
could be some of the areas of concern that plague all colleges,
generally. Areas such as organization of residence halls systems,
campus vandalism, participation in student activities, alcohol/drug
abuse, and the like. The use of campus environmental assessments
and subsequent campus design prerogatives is a condition that must
be met to resolve these issues. Students identify more closely and
become more respectful towards residence arrangements where they
have a part in the designing. The primary way to restrict the
growth of alcohol/drug abuse is by redesigning the environments on
and around college campuses. The days when there were legal
restrictions of the proximity of liquor sales outlets to
educational institutions were good. Allowing the redesign of those

areas contiguous to campus to include liquor sales, hastened the
rate of drug/alcohol abuse among students. Redesigning the
administrative and philosophical orientation of housing programs to
not enforce liquor regulations in the residence systems hastened
the abuse rate. If an assessment were made of students' perceptions
of the physical environment of most libraries as to the degree of
satisfaction as a place to study, most reactions would be
complimentary, but not completely reflecting a high degree of
satisfaction. All one has to do is to observe students' use of the
physical environment while studying outside of libraries. Usually
that style is much too casual and functionally aberrant to be
allowed in libraries. Redesigning study environments would
increase the likelihood that students would study more. It is
assumed studying more would translate to academic success. There
is much that supports the introduction of campus redesigning
principles into student services delivery systems.

A cursory review was made at Hawkeye Institute of Technology
by this author to determine if there was a need for a campus
environmental assessment and redesign. Many indices exist that
assessment and redesign could be helpful in alleviating. Two
examples will be discussed; (1) imposition of state smoking
guidelines for public buildings and (2) the physical arrangements
of the financial aid office.

When the college undertook imposition of state guidelines on smoking, their efforts were to be applauded. But the designation of certain physical areas of the campus environment as smoking and non-smoking areas has had limited effectiveness. Doorways/entryways to each building were designated smoking areas; the majority of the cafeteria was designated a smoking area; smoking was allowed in a closed congested area where there is no air circulation. In appropriate fairness to the school, due to physical space limitations, other alternatives were felt to be too disruptive to the learning environment or too costly for implementation. All things considered, judging by the number of student and staff complaints on the newly designed smoking and non-smoking environment, the design mechanisms utilized were inadequate. A sampling survey is being designed to measure students' and staff's perceptions of these newly designed areas. Based on insights gained from reviewing the literature of eco-systems management, one can substantiate that redesign efforts have produced a high level of dissatisfaction in smokers and non-smokers alike. Hopefully, enough insight will be gained from the survey, to validate it as reasonable assessments of the situation and be a guide towards redesign initiatives. Remedying this smoking dilemma could be well served by utilizing the prescriptive scenarios generated by environmental design.

The financial aid office is another illustrative example. At one time the office staff, with the exception of the Director, were housed in an open bay area. The flow of activity was high. Students were constantly waiting in line, coming and going. There was no privacy. Students were asked to discuss their personal financial matters, literally, in the immediate presence of others. Needless to say, this environment generated considerable complaints from students. Since the physical environment has been redesigned to include a greater sense of privacy when discussing personal matters, the number of complaints received are significantly reduced. Redesigning the physical space seems to have relaxed and reduced the anxieties of students about this office. As part of this redesign effort, space was allocated for more than ample display/access room for related financial aid paperwork. Students and staff can now simply go to one shelf/file and retrieve all basic financial aid forms. So privacy, accessibility and an increase in the degree of satisfaction students perceive about the financial aid office seem to be a result of the efforts to match the physical environment to the student's needs.

This example further illustrates the need to take theories concerning adjusting the environment to matching student needs as seriously as we take theories concerning one on one counseling to solve student dilemmas.

The reader of this paper should be advised the opinions expressed by the author on eco-systems management are based on a layman's observations. However, academic preparation, professional student services experience, and a review of the literature illustrates, demonstrably, a need to integrate eco-systems management theories into student services delivery systems.

There is a major consideration to be dealt with if student services personnel are to be humanists and advocates of eco-systems management. That consideration is, are student services personnel who advocate environmental management on parallel with evil marketing management types who use subliminal advertising to sell a product? Eco-systems management is designed to satisfy the students' personal and academic needs. Subliminal advertising is designed to allow the maximization of a person's fantasies. Meeting academic, personal and societal needs is what post secondary education is to its consumers and audiences. Whatever we can do to maximize the functionalization, personalization, and development of each should be utilized.

Many issues have surfaced in the last five to ten years to inspire new thinking in student services. None have done as much as eco-systems management. Little did Mr. Banning know that a simple button with the equation $B = f(P \times E)$ would spur as much professional motivation. So many problems that student services staff face today could be ameliorated by utilizing principles and

concepts from person-environmental behavior theories/principles such as personal-environment congruence (Jacoby, Rue, & Allen, 1984).

REFERENCES

Conyne, R. (1983). Campus environmental design for counseling centers. Journal of College Student Personnel, 24, 433-437.

Conyne, R. (1975). Environmental assessment: Mapping for counselor action. Personnel & Guidance Journal, 54, 150-155.

Conyne, R. & Clack, R. (1981). Environmental assessment and design: a new tool for the applied behavioral scientist. New York: Praeger, 1981.

Crookston, B. (1975). Milieu management. National Association of Personnel Administration Journal, 13, 45-55.

Daher, D.M., Corrazini, J.G., & McKinnon, R.D. (1977). An environmental design program for residence halls. Journal of College Student Personnel, 18, 11-15.

Evans, N. (1983). Environmental assessment: current practices and future directions. Journal of College Student Personnel, 24, 293-299.

Holland, J. (1973). Making vocational choices: a theory of careers. Englewood Cliffs, N.J.: Prentice Hall.

Huebner, L., Royer, J., Moore, J., Cordes, D., & Paul, S. (1979). Stress management through an eco-system model in a school of medicine. In L.A. Huebner (Ed.). Redesigning campus environment: New directions for student services, (N8). San Francisco: Jossey-Bass.

Hurst, J., & Ragle, J. (1979). Application of the eco-system perspective to a dean of students office. In L.A. Huebner (Ed.). Redesigning campus environments: New directions for student services, (N8). San Francisco: Jossey-Bass.

Jacoby, B., Rue, P., Allen, K. (1984). UMaps: a person-environment approach to helping students make critical choices. Personnel and Guidance Journal, 24, 192-299.

L'abate, L. & Thaxton, M. (1981). Differentiation of resources in mental health delivery: Implications for training. Professional Psychology, 12, 761-768.

Lewin, K. (1936). Principles of topological psychology. New York: McGraw Hill.

Paul, S. & Morrill, W. (1979). Applying the eco-system perspective to the eco-system perspective. In L.A. Huebner (Ed.). Redesigning campus environments: New directions for student services, (N8). San Francisco: Jossey-Bass.

Ryan, W. (1971). Blaming the victim. New York: Random House.

Sanford, N. (1967). Where colleges fail. San Francisco: Jossey-Bass.

Schuh, J. (1979). Assessment and redesign in residence halls. In L.A. Huebner (Ed.). Redesigning campus environments: New directions for student services, (N8). San Francisco: Jossey-Bass.

Treadway, D. (1979). Use of campus-wide eco-system surveys to monitor a changing institution. In L.A. Huebner (Ed.). Redesigning campus environments: New directions for student services, (N8). San Francisco: Jossey-Bass.

Western Interstate Commission for Higher Education (1973). The eco-system model: Designing campus environments. Boulder, Colorado: Author.

Winkler, K. J. (1975, July 10). Campus ecologists seek to adapt colleges' environment to students. The Chronicle of Higher Education, p. 11.