EDUCATIONAL PLANNING

Vol. 8, No. 3

The Journal of The International Society for Educational Planning

PROMOTING THE STUDY AND PRACTICE OF EDUCATIONAL PLANNING

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Educational Planning is the refereed journal of the International Society for Educational Planning. *Educational Planning* is published quarterly by the Society, which maintains editorial, production, and correspondence offices at Memphis State University, Building 48 - South Campus, Memphis, TN 38152. The Journal is assigned ISSN 0315-9388 by the International Serials Data System/Canada.

For manuscript submission and membership information, please see last pages.

EDUCATIONAL PLANNING

VOLUME 8 NUMBER 3

ANNOUNCEMENTS

Notes on Contributors

Mark Baron is an Assistant Professor at the University of South Dakota.

Ty J. Handy is Director of Research at State Technical Institute in Memphis, Tennessee.

Jerry J. Herman is Professor and Area Head for Administration and Educational Leadership at The University of Alabama in Tuscaloosa.

Linda L. Lyman is an Assistant Professor of Education in the Department of Educational Leadership and Human Development in the College of Education and Health Sciences at Bradley University.

John H. McKnight is Deputy Superintendent of the Pitt County Schools, Greenville, North Carolina.

Raymond G. Taylor is professor of Educational Leadership at North Carolina State University. He teaches courses in research methodology, and his research is focused on applications of operations research to education.

John H. McKnight and Raymond G. Taylor

GRADIENT COHORT SURVIVAL FORECASTS: A REFINEMENT OF TRADITIONAL METHODOLOGIES

Enrollment forecasts play an important part in educational decision-making, not only because levels and costs of services must be anticipated, but also because revenues from Federal and State sources are largely governed by enrollments. Proper allocations and sound planning decisions are possible only if an accurate method of enrollment forecasting is available. To date, the cohort survival method is generally recognized as preeminent.

The present study sought to improve the cohort survival method as currently used, by first finding its more general case, and then by empirically searching for the specific version of the method that best fits a given school district.

Cohort Survival

In the context of education, a cohort is a group of students who tend to move through their years in school together. Some may join the cohort after it is formed, and others may leave. Thus the size of the cohort changes. Such changes may be expressed in terms of a ratio (that is, the ratio formed by expressing the size of the cohort for any one year in terms of the size of the same cohort in the previous year). A ratio of 1.00 indicates no change; a ratio above 1.00 indicates growth; and a ratio below 1.00 indicates decline. Generally, when change in cohort size is expressed in this manner, the statistic is known as the "survival" ratio.

One of the chief advantages of using the survival ratio as the basic statistic in forecasting is that each grade, each year, has its own ratio. This discrimination among grades and years provides an opportunity to make refined forecasts which are potentially more accurate than general curve fitting methods or any other technique based on aggregated data.

Generally, the survival ratio is used in forecasting as follows. The ratio is computed for every grade for the current year. It is then assumed that the same ratio will apply to at least the next year. Thus, next year's fourth -grade enrollment is forecasted by multiplying this year's third- grade enrollment by the current fourth- grade survival ratio. However, arbitrary elaborations of this process are common. Averaging the ratios for each grade over the past several years is used in order to attenuate the effects of any short-term irregularities. If such averaging is used, then a further elaboration is possible. The most recent years are given more weight than earlier years, and this weighting is distributed across years in a linear fashion. Such weighting is, of course, based on the assumption that the most recent history is more "relevant" to the projection than the early history. These elaborations are arbitrary because no empirical method is used: 1) to determine how many years of history should be averaged, 2) to assign weights, or 3) to determine that the distribution of such weights should be linear.

When one considers all the possible combinations of years of history, values of weights and shape of weighting distributions which are available (many of which could be intuitively justified), it is surprising that the arbitrary nature of present practice has not been more forcefully challenged. A few researchers, as indicated in Table 1, have suggested research on this subject.

The arbitrary selection of depth of history and steepness of linear weighting might result in the averaging of five ratios with weights of 1, 2, 3, 4 and 5. (Lower weights are applied to the earliest years). Sometimes four ratios are used with weights of 1, 2, 3 and 4. At least one state and one well-known consulting firm uses this method. Often four ratios are used, but they are unweighted. They have weights of 1, 1, 1 and 1. This selection is very

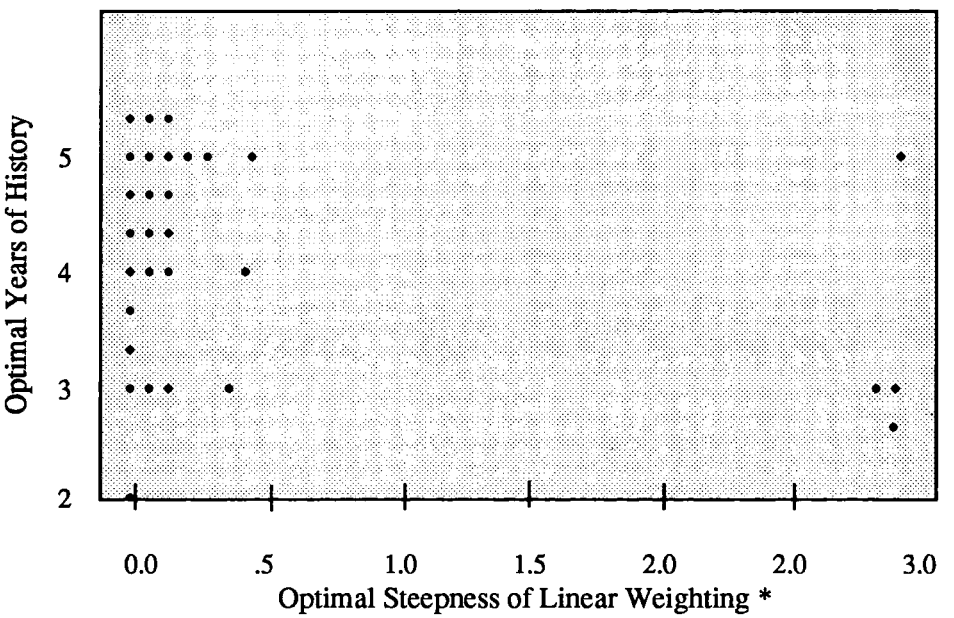
popular. In any case, if the method selected happens to provide a good fit with the school system's historic data, such a fit is purely fortuitous.

The gradient cohort survival method does not make an arbitrary choice of years of history, amount of weight, or shape of weighting distribution. Instead, it undertakes an empirical search on a district-by-district basis to determine the best model for each district and then uses that model to make forecasts. This gradient method has been validated on 30 Maine school districts and, not surprisingly, in every case it produced results which were equal to, or superior to, arbitrary model selection. (McKnight, Taylor, & Reid, in press, 1991)

A summary of the Maine results is reported in Figure 1. An unweighted (or nearly unweighted) gradient was optimal for 26 of the 30 districts studied. Note also that in three of the four remaining districts which produced weighed gradients as optimal, the depth of history was low. These observations confirmed the author's theory that depth of history and steepness of slope would be inversely correlated as discussed later in this paper.

Figure 1

Optimal Depth and Steepness found by Applying the Gradient Method to Data from 30 Maine School Districts



*0.0 = No weighting, traditional unweighted method
1.0 = Weights which increase by 1 for each year (1, 2, 3, 4 ....)
(This is the traditional weighted method)
2.0 = Weights which increase by 2 for each year (1, 3, 5, 7 ....)
3.0 = Weights which increase by 3 for each year (1, 4, 7, 10 ...)

Literature

The cohort survival technique is preeminent among the forecasting methods used by educational planners. However, few studies have addressed such issues as the number of

years that should be averaged in order to produce a reliable ratio, or whether and how such ratios should be weighted. A few studies (see Table 1) argued that the optimal depth of history and the optimal weighting scheme might be different among districts and ought to be empirically determined for each district separately. None, however, described a process for doing such a search. It was left to the present study to address the problem of empirically searching for the optimal combination of forecasting parameters.

Table 1

Comparison of Enrollment Forecasting Research Results

Author and Method	Results and/or Recommendations
Chailangkarn (1969)	
Three modifications of cohort-survival.	The unweighted cohort-survival method, using five years of history, produced the most reliable projections for five Oklahoma cities.
Joss (1969)	
Unweighted cohort-survival. Multiple regression.	Accuracy of forecast depends on depth of history (3, 5, and 7 years were studied). However, the optimal depth depends on the method used.
Webster (1969)	
Five modifications of unweighted cohort-survival. Twelve modifications of simple regression. Multiple regression.	Communities were categorized by growth pattern and several methods of forecasting were used to determine which worked best for each type of growth. Cohort-survival, simple and time- series regressions each showed some strength.
Bowman et al. (1975)	
Unweighted cohort-survival. Average ratio. Linear regression.	No comparisons among the accuracy of the methods was made. Forecasts were expressed as smooth curve graphs. Author supports the use of cohort-survival method without providing empirical evidence for its superiority.
Furno (1977)	
Unweighted cohort-survival. Multiple regression.	The unweighted cohort-survival method produced more accurate results than the multiple regression model, and was less expensive.
Ballance (1980)	
Unweighted and weighted cohort-survival. Cohort-survival with 5,7, and10 years of history.	The 7 and 10 year history with no weighting produced the most accurate enrollment forecasts for stable and growing communities. A weighted method worked best in declining communities, but tended to underestimate the number of students.

Table 1 Continued

Author and Method	Results and/or Recommendations
Taylor (1982)	
Five modifications of the cohort-survival method.	Author recommended classifying districts by growth pattern and applying the formula modification that works best for each condition. He also recommended that others develop additional modifications of the cohort-survival method which include variations in the weighting system. The recommendations of this 1982 study are most relevant to the research reported here.
Alsbaugh (1981)	
Cohort-survival. Mean growth. Linear regression.	Averaged cohort-survival ratios produced a more accurate forecast than linear regression. The optimal number of years of history varied from school to school. Six to eight years is recommended.
Hackman (1983)	
Modifications to the unweighted cohort-survival method.	This study focused on newborn to grade 1 predictions. No one modification of cohort-survival was found to be superior. District growth pattern had no effect on accuracy of forecasts.
Bernhardt (1983)	
Weighted cohort-survival.	Weighted cohort-survival with four years of history applied to small planning units of 50-100 students produced sufficiently accurate forecasts.
Adams (1985)	
Unweighted cohort-survival. Grade retention. Others.	The two ratio methods, cohort-survival and grade retention, were found most reliable for 1, 5 and 10 year forecasts, except for initial entry for which there was no superior method.

The Gradient Survival Ratio Method

In the present context, "gradient" combines the concepts of length, steepness, and shape of slope. More particularly, gradient refers to each of 187 combinations of values for three variables. The first variable, length, is determined by depth of history which, in this study ranged from two to five years and yielded one to four survival ratios. One more year of history is always needed than the number of ratios specified because the first ratio requires data from an immediately prior year. The second variable was the weighting slope which ranged from 0.00 (a horizontal slope equivalent to an unweighted method) to 3.00 (a very steep slope in which a high premium is placed on the value of the most recent year). The third variable was the shape of the weighting slope which was allowed to be either linear or exponential.

Once values of these three variables are chosen the result may be represented graphically as a line. Depth of history will determine the length of the line. The weighting scheme will determine steepness of the slope of the line, and the linear vs. exponential decision will determine the shape of the line.

The present study examined 187 gradients for each of 30 school districts. The 187 gradients were formed as follows. Depth of history was stepped from two to five years in increments of one year. Within each depth of history, steepness of weights was stepped from 0.00 to 3.00 in increments of .10. Within each combination of the above, weights were stepped from the first to the last year both linearly and exponentially. When depth of history was set at its minimum value (i.e., two years or one ratio), no variation in weight or shape of distribution was possible. Thus the number of gradients is 187 (3 ratios x *31 weightings* x *2 shapes + 1).*

The Importance of an Empirical Search

It is understandable that earlier researchers would seek a "best" method of making forecasts and, once identified, would also seek an optimal depth of history or weighting method. However, the literature clearly indicates that there is no one best scheme. This should not be surprising. The entire search for a best depth of history or a best weighting scheme is analogous to using regression for forecasting and then searching for one best slope, one optimal intercept, and one ideal standard error to be used in all cases. When using regression, one expects each data set to yield its own values for these important variables. Why shouldn't cohort survival be approached the same way? In other words, let each cohort "experiment" yield its own best values for depth of history and strength and shape of weighting. What is needed is a straightforward method for empirically searching for the optimal values of those three variables on a case-by-case basis.

The gradient method uses up to ten years of historical data to determine the best survival ratio to apply to any given school system. It employs the first five years of the data as true history and the second five years as a "pseudofuture." This is equivalent to assuming that the "present" is located at the end of the fifth year of history and that the last five years of history are in the future. The older historical data are used to generate 187 sets of survival ratios (i.e., a set consists of one ratio for each grade), and each set is then used to make an independent enrollment projection into the pseudofuture. The resulting 187 projections are then compared with the real data from the pseudofuture to determine a mean square error (MSE). The MSE is a popular statistic for comparing forecasts. It is simply the arithmetic mean of the squared deviations of observed enrollments from projected enrollments. The set of ratios that generates the lowest MSE is selected as optimal and is then used for making projections into the true future.

Suppose that for a given school district, the empirical search for a best gradient yielded the following result: Ratios=3, Slope=2, Shape=E. In this case, when making projections for the next year, the last three survival ratios would be weighted and averaged. The weights would be 1.00 for the first ratio (the first ratio is always weighted at 1.00 regardless of the gradient), 3.00 for the second ratio, and 9.00 for the third. Exponential weights can be found by adding 1.00 to the slope and then multiplying this sum by the previous weight.

Linear weights are found by starting with 1.00 for the first year and then by incrementally adding the value of the slope each year. Thus, in the above example, if a linear gradient had been recommended (assuming Ratios=3 and Slope=2 are unchanged), the weights would be 1.00, 3.00, and 5.00.

Depth of History vs. Steepness of Slope

Among the theoretical considerations of the gradient method is the conflict between depth of history and steepness of slope. One would expect to find few gradients which are optimal for any given school system which combined high values for both depth of history and steepness of slope. That is, if multiple years of history are needed to contribute to optimal forecasts, then one would expect that it is counterproductive to diminish the value of that early history by placing a high premium on the most recent year(s). Again, in theory, one would expect to find either deep histories with near-horizontal slopes (i.e., an unweighted method) or shallow histories with a steep slope.

Based on empirical searches for an optimal gradient for each of 30 Maine school districts, only 1 school district had an optimum gradient with a deep (four-year) history and a steep slope (linear, Slope=3). Consistent with theory, 3 had shallow histories and steep slopes, 1 had a shallow history (two-year with no slope possible), and 25 had deep histories and slopes at or near 0.00. Thus the theory and the research would both suggest that an empirical search on a district-by-district basis is best, but if such data cannot be obtained, then the "best guess" is a multi-year, unweighted method. However, in the Maine study, if a multi-year, unweighted method had been used for all districts, the method would have been sub-optimal 25 percent of the time.

Note: The authors would be willing to collaborate with readers on the further testing of the gradient model. Software for gradient cohort survival forecasting is now available.

References

Adams, J.L. (1985). A comparison of five models for forecasting rural school enrollments in the state of Georgia. *Dissertation Abstracts International.* (University Microfilms No. 86-06-014)

Alsbaugh, J.W. (1981). Accuracy of school enrollment projections based on previous enrollments. *Education Research Quarterly, 6*(2), 61-67. (ERIC Document Reproduction Service No. EJ 254 538)

Ballance, C.T. (1980, November). *A comparison of four survival ratio methods for forecasting school enrollment.* Paper presented to the annual meeting of the Mid-South Education Research Association, New Orleans, LA.

Bernhardt, V.L. (1980). *Projecting student enrollments: A basic step in comprehensive school district planning for declining enrollment.* National Institute of Education (DHEW), Washington, DC.

Bowman, J., Hyde, K., Pritchard, J. & Wetter, D. (1975). *School enrollment projections, a report.* Des Moines, Iowa: Des Moines Public Schools. (ERIC Document Reproduction Service No. ED 144 259)

Chailangkarn, J. (1969). An investigation of methods for predicting school enrollments in Oklahoma. *Dissertation Abstracts nternational.* (University Microfilms No. 69-17-922)

Furno, O.F., & Fowler, W.J., Jr. (1977). *The projections of pupil population in New York state.* (Research Study No. 10). New York, NY. (ERIC Document Reproduction Service No. ED 159 809)

Hackman, D.G. (1983). An analysis of factors which affect the accuracy of the cohort-survival method of enrollment forecasting. *Dissertation Abstracts International, 44*, 3556A. (University Microfilms No. 84-06-267).

Joss, C.C. (1969) A comparison of two selected methods of predicting enrollments in rapidly growing school districts. *Dissertation Abstracts International.* (University Microfilms No. 70-04-378)

McKnight, J.H, Taylor, R.G., and Reid, W.M. Validation of the gradient cohort survival method for making student enrollment forecasts. In press, *Journal of Research in Education.*

Taylor, J.R. (1982). An investigation of techniques for predicting school enrollments in Georgia. *Dissertation Abstracts International, 43*, 06A. (University Microfilms No. 82-25-237)

Taylor, R.G., & McKnight, J.H. Notes on the empirical search for an optimum weighting gradient for cohort survival ratios. (In manuscript; see note below *)

Webster, W.J. (1969). The applicability of selected ratio and least-squares regression analysis techniques to the prediction of future educational attendance patterns. *Dissertation Abstracts International, 31*, 03A. (University Microfilms No. 70-15-156)

* This article is under review. A copy of the manuscript or the citation, when available, may be obtained from R. Taylor, Box 7801, NCSU, Raleigh, NC 27695.

A PLANNING MODEL FOR AMERICAN SPONSORED OVERSEAS SCHOOLS IN LATIN AMERICA

Introduction

For over one hundred years American Sponsored Overseas Schools (ASOS) have provided an American-type education for dependents of U.S. citizens living abroad. Within the past twenty-five years, however, declining enrollment of U.S. dependents and increased host and third country participation have forced many of these schools to seriously reconsider the validity of their original goals and objectives. Although careful planning is essential in dealing with these changes, the unique nature of ASOS and rapid turnover of their administrators and board members present serious obstacles to the planning process.

After presenting an historical overview of the American Sponsored Overseas Schools and their general characteristics, this paper will examine some of the specific planning problems encountered by ASOS and how some of these schools have attempted to resolve these problems. In addition, relevant comparisons to some generally accepted planning models will be made. The ASOS in Latin America will serve as the principal focus of this report.

Historical Overview

The following statement by Luebke (1976) provides a great deal of insight into the origins and purposes of many of the American Sponsored Overseas Schools:

> Historically, Americans abroad have chosen to establish and operate community schools wherever they have been stationed rather than to send their children away for their education. In 1888, United States citizens living in Mexico City established their own school in order to offer their children educational opportunities similar to what would have been available to them at home. This was the first of several hundred elementary and secondary community schools which have been established since that time by United States citizens in nearly a hundred foreign countries and dependencies abroad. (p. 13)

Typically, the American Sponsored Overseas School was founded by a small group of Americans residing in a foreign capital who wanted their children to have an American education. The few students enrolled were frequently taught by wives of U.S. government or corporate employees. A rented apartment or house containing very little educational material or equipment served as the school building. Such schools faced great difficulties in acquiring needed instructional materials, and facilities for physical education and recreational activities were nonexistent. General management of these rudimentary schools was left up to the few interested parents elected to serve as school boards.

As the size of the American community grew, the inadequacy of instructional materials and facilities became increasingly apparent. The lack of time and adequate training of the teaching wives and ad hoc board members further contributed to the mounting problems faced by these community schools. The only acceptable solution to these mounting problems was to hire U.S. trained administrators and teachers to staff these growing community schools.

With continued improvements in the instructional program, local citizens and members of the international community who desired an American-type education for their children began to apply for admission to these schools. It soon became necessary for these overseas schools to integrate the study of local language, customs, geography, and history into the instructional program. This required recruiting local English-speaking teachers and increasing tuition to pay for it.

Eventually, growth of these schools demanded the acquisition of property and the construction of permanent school facilities. The staffs were becoming a well-rounded professional group comprised of full-time administrators and master teachers recruited from the United States along with many classroom teachers locally recruited. Such school facilities and staffs were fully capable of administering quality educational programs to children of U.S. citizens, host, and third-country nationals. Presently, most ASOS schools are at some point along the way to reaching the final stage described above (Mannino & Connor, 1966).

General Characteristics of ASOS

Due to the individual circumstances of their founding, unique geographic situation, and wide variety in student enrollment and physical facilities, a typical ASOS is difficult to define or exactly describe. There are, however, certain communalities which do occur that assist in describing these schools. Some of the salient characteristics shared by nearly all of these schools have been described by Mannino and Connor (1966) as follows:

1. The schools are privately controlled, nonprofit, nonsectarian schools basically American or bi-national in character.
2. The schools are controlled by local school boards drawn from the local parent group, including in many instances citizens of the local country and third countries in addition to Americans. (Note: Third country denotes any country other than the United States and the host country.)
3. The schools are financed primarily through tuition payments, with additional support from a variety of sources including business and industrial firms, churches, foundations, and government agencies whose dependent children attend the schools; in many instances there is substantial support from local private and government groups.
4. The schools enroll children of Americans and other foreign nationals residing at the post and, wherever local laws permit, children from the host country as well.
5. The language of instruction is English, supplemented, in most instances, with the language of the host country.
6. The curriculum and methods of instruction are based upon American patterns, with special attention to the language, literature, and social studies of the host country.
7. The administrators and most of the teachers are Americans or American-trained, with a large proportion of staff hired locally from American dependent wives and qualified local personnel..
8. There is rapid turnover of personnel in nearly all schools, which tends to weaken stability and continuity in the school program.
9. The student body in nearly every school is constantly changing, thus further emphasizing instability.
10. Distance from the United States makes it difficult, time-consuming, and costly for schools to obtain instructional materials and to keep abreast of developments in American education.
11. Lack of funds and, in many instances, difficult living conditions make recruitment and retention of professional personnel from the United States difficult.

12. Small enrollments in many schools, particularly at the secondary level, make it most difficult and costly for schools to offer comprehensive school programs, and isolation from other American-sponsored schools almost precludes consolidation or cooperation in employing supervisors or specialists.
13. Inability to recruit staff from the United States requires schools to hire locally such personnel as may be available, regardless of professional qualifications. (pp. 11-12)

The American Sponsored Overseas Schools in Latin America constitute the oldest and largest group of ASOS in any region of the world. Almost one half of the ASOS in Latin America were founded before 1950 and their enrollment represents 44% of the total worldwide ASOS enrollment (U.S. Department of State, 1987).

Perhaps the most distinguishing characteristic of the ASOS in Latin America is their bi-national character. Luebke (1976) pointed out that over 60% of the students and over 50% of the staff members in Latin American ASOS are citizens of the country in which the schools are located. P.G. Orr (1974) explained that the bi-national character of the Latin American ASOS is due to the fact that "many of the Latin American parents had been educated in the U.S. and desired an American education for their children." (p. 11)

In spite of the bi-national character of the American Sponsored Overseas Schools in Latin America, they share certain common characteristics among themselves and with the ASOS throughout the world. Several of these, as described by Orr and Kling (1982), include:

1) they are geographically dispersed and therefore relatively isolated from each other and from other sources of support and assistance,
2) they serve a pupil population including three categories of pupils: U.S., Host country, and Third country nationals,
3) they have a U.S.-type program,
4) they employ a multinational faculty and staff,
5) they value and share . . . beliefs about fundamental elements which constitute the conditions for quality schooling and which are most commonly associated with U.S.-type schools . . . (p. 12)

Mannino and Connor (1966) identified two basic purposes for ASOS in the following terms:

> In general these schools serve two basic purposes: (a) to to provide educational opportunities for the dependents of U.S. government employees stationed abroad, and (b) to demonstrate to foreign nationals the philosophy and methods of American education. (p. 7)

Various researchers, however, have identified purposes for ASOS which go beyond these two basic purposes. Orr and Seaquist (1968), for example, described another role for ASOS which includes serving as living examples of American community democracies. A slightly different purpose for ASOS, elucidated by Conlan (1982), includes the "promoting, fostering, and maintaining of cross-cultural understandings and experiences for their students" (p. 4). It should be noted, however, that due to the independent nature of these schools, specific purposes may exist for some schools which are not within the context of those already described.

Obstacles to Rational Planning in ASOS

To explain fully some of the planning problems faced by American Sponsored Overseas Schools, this section will present a brief summary of traditional rational decision making and planning and will examine several of the relevant characteristics and trends among ASOS which limit the ability of ASOS to plan in the classic rational sense.

Rational Model of Planning

For many years a wide variety of organizations have employed the classic rational approach to solving problems and making decisions. This reliance on rational decision making continues to exert a strong influence on organizational planners and decision makers and has even found its way into the field of educational planning. Tanner and Williams (1981) stated that:

> Decision processes based on plans resulting from the rational systems approach to problem solving have been abundant in recent years . . . The rational systems approach reached its highest level of popularity in the 1960s especially in the field of management science, and was introduced in educational organizations over a decade ago as a way of approaching decision making logically. (p. 65)

The influence of rational planning systems on education has reached the point where, as Clark (1981) put it,

> Traditional planning systems dominate the field of education from the development of national policy and programs to planning within individual institutions (p. 43).

Since March and Simon's (1958) early work on the rational decision-making process in organizations, many variations on the central theme of rationality have appeared in the literature. There are, however, four basic assumptions upon which all traditional rational systems are based. These four assumptions, described by Simon (1983) in his account of subjective expected utility (SEU) theory, are briefly as follows:

> These are the four principal components of the SEU model: a cardinal utility function, an exhaustive set of alternative strategies, a probability distribution of scenarios for the future associated with each strategy, and a policy of maximizing expected utility. (pp. 12-13)

Changing Enrollment

One of the trends among ASOS which has a potentially profound effect on long-range rational planning is the rapidly changing student population found in these schools. Of particular interest is the decline in enrollment of U.S. students in ASOS both in Latin America and world-wide.

From Table 1 it is obvious that, although total enrollment in ASOS worldwide continued to increase (by almost 25%), enrollment of U.S. dependent children declined steadily over the past 15 years. In the early 1970s U.S. students accounted for almost half (48%) of the total enrollment in ASOS worldwide. However, by the mid-1980s just over one quarter (27%) of the students enrolled in ASOS were U.S. citizens.

During the same period, enrollment of both host country and third country dependent students increased. Although host country enrollment only increased from 33% to 40%, the percentage of third country enrollment almost doubled (from 19% to 33%).

Overall, during this period, the U.S. dependent group dropped from being the largest single group in ASOS worldwide to being the smallest group. This significant change certainly has implications for those board members and administrators who are charged with the responsibility of determining and implementing long-range goals and objectives for their schools. P.G. Orr (1982) pointed out:

> The significance of this worldwide trend will vary from region to region — and will also vary from school to school within any one region. Nevertheless, these enrollment trends clearly raise several public policy and ASOS policy questions and issues which should be treated by those concerned with the capability of ASOS to provide adequate education for dependents of U.S. corporate and government employees abroad. (p. 5)

Table 1

Worldwide ASOS Enrollment by Country of Student Origin for 1973-74 and 1986-87

Years Enrollment	United States	Host Country	Third Country	Total
1973-74	33,992 (48%)	22,958 (33%)	13,537 (19%)	70,487 (100%)
1986-87	23,851 (27%)	34,516 (40%)	29,087 (33%)	87,454 (100%)

Note: The data for 1973-74 are from *Contributions of American Sponsored Overseas Schools to Improve International and Intercultural Relations* (p. 16) by P.G. Orr and A. Conlan, 1984, Tuscaloosa, AL: International Education Associates. The data for 1986-87 are from *Fact Sheet, 1986-1987* (p. 2) by the U.S. Department of State, Overseas Advisory Council, Office of Overseas Schools, 1987, Washington, DC: U.S. Government Printing Office.

As Table 2 indicates, the situation in American Sponsored Overseas Schools in Latin America is slightly different than that observed in ASOS worldwide. Although these schools are more bi-national in character and the U.S. population smaller to begin with (using 1973-74 enrollment as a baseline), the percentage of U.S. children in these schools has also dropped dramatically over the past decade or so. The percentage of U.S. dependents in ASOS in Latin America in 1986-87 (16%) was just over half of what it was in 1973-74 (29%). During the same period, host and third country enrollment both increased (albeit relatively less than the increase observed in these two groups worldwide), so that the host country enrollment currently accounts for close to three-fourths (71%) of all enrollment in ASOS in Latin America.

Even in Latin American ASOS, therefore, the trend toward decreasing U.S. enrollment (with concomitant increases in host and third country enrollments) is obvious. Any attempt, therefore, at rational goal setting and long-range planning for the future of ASOS in Latin America must be undertaken with this trend of changing enrollment in mind.

Table 2

Latin American ASOS Enrollment by Country of Student Origin for 1973-74 and 1986-87

Years Enrollment	United States	Host Country	Third Country	Total
1973-74	9,215 (29%)	19,183 (60%)	3,572 (11%)	31,925 (100%)
1986-87	6,155 (16%)	27,286 (71%)	5,146 (13%)	38,587 (100%)

Note: The data for 1973-74 are from *Dependent Schooling Abroad and the United States Corporation* (pp. 8-9) by P.G. Orr, 1980, University, AL: Bureau of Educational Services and Research. The data for 1986-87 are from *Fact Sheet. 1986-1987* (p. 2) by U.S. Department of State, Overseas Schools Advisory Council, Office of Overseas Schools, 1987, Washington DC: U.S. Government Printing Office.

This continuing trend of changing enrollment, with the accompanying change in composition of the parent and community support groups, raises a critical decision-making issue: should ASOS as a group (or individually) consider changing their basic purpose from providing an American-type education to providing a predominantly host country-type education using English as the medium of instruction? P.G. Orr (1982) addressed this issue when he wrote:

> The most significant question for ASOS school boards is to determine the relative importance of providing a U.S.-type education which will facilitate continuation in U.S. education by transfer to U.S. schools or continuation in U.S. post-secondary education and the access which U.S. children will have to the program. (p. 5)

In their attack on rational planning as the only relevant planning model for organizational decision-making, Cohen, March, and Olsen (1972) described three properties of organized anarchies. The first property, problematic preferences, seems particularly relevant to decisions faced by ASOS regarding the primary purpose for their existence. They elaborated on the property of problematic preferences in the following manner:

> In the organization it is difficult to impute a set of preferences to the decision situation that satisfies the standard consistency requirements for a theory of choice. The organization operates on the basis of a variety of inconsistent and ill-defined preferences. It can be described better as a loose collection of ideas than as a coherent structure; it discovers preference through action more than it acts on the basis of preferences. (p. 1)

Personnel Turnover In ASOS

A second characteristic of American Sponsored Overseas Schools which has a profound effect on rational planning is the high incidence of turnover among personnel, particularly administrators and board members. Roth (1971/1973), for example, found that in accredited overseas schools almost half of the superintendents vacated their positions after one to two years, and that very few remained in the same superintendency for more than four years. Similarly, Mandrell (1980) showed that 25 percent of all ASOS superintendents had

been in their positions for only one year, while fewer than 25 percent had been in their current positions for more than seven years. Further evidence of high superintendent turnover was provided by Vargas (1980) who found that the average tenure of ASOS superintendents in Latin America was only 4.1 years.

In a worldwide survey of ASOS, P.G. Orr (1976) reported that approximately 60 Percent of the superintendents had been in their present positions for less than two years. He estimated the turnover rate of ASOS chief administrators to be 40 percent annually, and found that almost 60 percent of the schools surveyed had chief administrators who had been in their positions for less than three years. Of equal relevance, in this same survey Orr found the average membership term of board members in ASOS to be just under 1.9 years. He concluded that:

> There is sufficient evidence to support the conclusion that turnover of board members is of a magnitude that continuity of school development cannot be assured by continuity of leadership of long-term board members. (p. 13)

Another of the properties which Cohen, March, and Olsen (1972) depicted as interfering with the rational planning / decision-making process is fluid participation. They continue:

> Participants vary in the amount of time and effort they devote to different domains; involvement varies from one time to another. As a result, the boundaries of the organization are uncertain and changing; the audiences and decision makers for any particular kind of choice changes capriciously. (p. 1)

Autonomy of ASOS

Another factor which complicates the planning process of American Sponsored Overseas Schools is the high degree of independence or autonomy enjoyed by each ASOS. Luebke (1976) described ASOS as being "private, independent institutions, owned and operated by the users" (p. 30). No ASOS is owned, operated, or controlled by the U.S. government. (P.G. Orr, 1974)

The ASOS in Latin America follow this same pattern of autonomy. In reference to ASOS in Mexico, P. Orr (1983) wrote:

> Each of these schools has relative autonomy to determine its own philosophy and set its own operational practices. This autonomy is reported to exist because these schools are elatively free from control by the U.S. government or from the host-country government in which they operate. (p. 15)

Unlike the French or German schools in Latin America, which are direct agents and under direct control of their home governments, the American School is independent of the U.S. government. This allows the parents of children enrolled in ASOS to control the nature of the education which their children receive through election of board members. (Patterson, 1969)

Although this autonomy and individuality permits each ASOS more responsiveness to the specific needs and desires of its own constituents, the lack of centralized planning and

sharing of ideas forces each school to "fend for itself" in the planning arena. This results in a situation which Orr and Seaquist (1968) summarized in the following manner:

> American school superintendents and board members in Latin America thus have to do not only a more difficult job of planning, but have less formal or professional control, guidance and regulation to assist them. (pp. 14-15)

The third property of organized anarchies described by Cohen, March, and Olsen (1972), which appears relevant in light of the preceding discussion, is unclear technology. Without the ability to share ideas and learn from the past experiences of others, most ASOS share the property of unclear technology in that they "operate on the basis of simple trail-and-error procedures, the residue of learning from the accidents of past experience, and pragmatic inventions of necessity." (Cohen, March, & Olsen, 1972, p. 1)

Another, perhaps more accurate description of the inter-relatedness of ASOS draws upon the 'loosely coupled' system model proposed by Weick (1976). Weick claims that loose coupling exists "if two systems (or in this case, two schools within the same overall system - author) either have few variables in common or if the common variables are weak compared to other variables that influence the system" (1985, p. 1). ASOS do, in many cases, form regional organizations or associations. However, the uniqueness or individuality of each school creates an organization composed of very 'loosely coupled' members. Whether the 'garbage can model' (Cohen, March, & Olsen, 1972) or the 'loosely coupled' model (Weick, 1976) best describes ASOS, autonomy and lack of interchange among the ASOS place severe restrictions on utilizing a traditional rational model of planning.

Funding Patterns in ASOS

The final characteristic among American Sponsored Overseas Schools to be considered which limits planning in a purely rationalistic manner is the means by which these schools procure funding for their ongoing operations. In regard to this question, Luebke (1976) wrote:

> The schools are supported principally from tuition payments of students enrolled, with only a small portion deriving from grants provided by the Office of Overseas Schools or from other sources. In 1975, for example, the combined budgets of all 140 schools receiving assistance totaled more than $85 million; of this amount, grants-in-aid from the U.S. government represented only about five percent. (p. 30)

Unlike most public schools and school districts, in which availability of resources and funding are fairly consistent and predictable, annual funding for each ASOS is neither consistent nor highly predictable. Changing enrollment and fluctuations in foreign currency exchange rates limit any individual school's ability to accurately predict the total amount of funds and resources which will be available to them from one year to the next (or, in some instances, even from one month to the next). The ability to plan rationally depends, at least to a large degree, upon being able to generate alternate solutions whose feasibility must be linked to available resources. In the absence of this knowledge (i.e. not knowing exactly what level of resources will be available), traditional rational planning would not appear to be a viable alternative.

The Need for Planning in ASOS

American-type schools overseas have a unique opportunity to provide good educations for the children who attend them. However, each school's potential to take advantage of this opportunity is limited by a number of voids in their planning base. Orr and Seaquist (1968) enumerated these voids as:

1. The lack of information about the relative status of the school;
2. The lack of a clear direction concerning what a school seeks to accomplish; and
3. The lack of a designed strategy which gives direction of how to get from where the school is to where it believes it should be. (That is, perhaps, the most important item) (p. 13)

In addition to the lack of information, clear direction, and designed strategy, other obstacles to the planning process are faced by administrators and board members in most ASOS. Perhaps the most significant of these obstacles is the lack of formal or professional control, guidance, or regulation to assist them in the difficult task of planning for their schools (Orr & Seaquist, 1968).

In spite of these serious gaps in their planning bases, educational planning does occur in these schools. As Orr and Seaquist (1968) noted:

> Educational planning occurs in these schools whether by design or default. Every time a board of directors makes a decision or establishes a policy, it is functioning not only in decision-making but also in planning. (p. 15)

When discussing the specifics of planning in ASOS in Latin America, Orr and Seaquist (1968) consider three levels or types of planning. They believe that planning should ideally be based upon a systems approach in which adequate facts and quantitative data are gathered and viewed within the totality of the school's philosophy, objectives, and programs.

A second type of planning, which is very common among ASOS in Latin America, is planning without adequate facts and data. Decisions made in these schools are based upon the decision makers' judgment, sympathetic introspection, and intuition. Such schools, they conclude, may function successfully for a given length of time, but are never able to realize their full potential.

The third planning scenario is one in which facts and data are available, but the school itself has no institutionalized goals. This "planning without purpose" process produces actions based more upon individual whim than upon consistent and identified goals of the school and its clientele. Many ASOS in Latin America currently function at this level, at least partly due to the lack of continuity among administrators and board members.

Due to the high proportion of Latin American ASOS which engage in planning without purpose and/or planning without adequate facts and data, Orr and Seaquist (1968) recommended that these schools adopt the more rational systems analysis approach. They concluded that:

> Explicit in the process of educational planning is strategy building. This elementt requires first of all that a school establish for itself some targets ... this indicates that a school should decide on goals and procedures which will provide the board criteria and a system against which to measure its subsequent actions to determine how all of its agreed upon targets are being affected. This primary point in strategy building is, therefore, establishing targets. (p. 15)

They further suggest that the second point in strategy building involves establishing objectives and setting priorities. This aspect of strategy building implies that school functionaries must make many critical decisions -- either within a planned system or by chance. If these decisions are not guided by overall objectives and strategies, the school's future is basically left to chance alone.

When relating policy development to planning, P.G. Orr (1976) suggested that ongoing policy development is a basic component of the overall planning process. This relationship was further elaborated when he stated that:

> The ASOS which decides to deliberately and systematically plan its future . . . will probably decide to engage in a comprehensive self-study and futures planning activity with one component of the study dedicated to the policy development function as an integral part of the total plan. . . . Ideally, policy is always related to goals and is also interrelated. These relationships occur normally when policy is developed as a supporting system within a comprehensive plan. (p. 46)

To summarize, many of the American Sponsored Overseas Schools in Latin America lack direction due to either the lack of data and information or the lack of institutional goals and objectives. Either of these deficits severely limits the school's ability to develop and implement comprehensive plans for future development. Planning problems in these schools are further exacerbated by high turnover among administrators and board members, as well as by lack of professional guidance and regulation in the planning process. Suggested solutions to these planning problems include utilizing a systems approach to gather sufficient information and data to allow schools to formulate comprehensive plans based upon long-range goals and objectives, and developing policies based upon these goals and objectives to insure that the school continues moving in the appropriate direction (Orr, 1976; Orr & Seaquist, 1968).

A Planning Model for ASOS in Latin America

It should be noted that in practice, organizations may choose an eclectic approach to planning and decision making by incorporating elements of two or more specific planning models. In their nationwide survey of public school superintendents, for example, Beach and McInerney (1986) found that the majority of respondents utilized planning approaches which borrowed concepts from a variety of planning models rather than from "slavish adherence to any one of them." (p. 189) They concluded:

> Thus none of the planning models was found to be completely congruent with the domain of educational planning as described by respondents to this study. (p. 190)

Although such an eclectic approach might also be viable for planning in Latin American ASOS, it is the intent of this paper to select the one planning model which best suits the needs and characteristics of ASOS in Latin America. The author does recognize, however, that given sufficient empirical data about each of the schools, their administrators and board members, and their current practices, an optimal combination of elements from all of the planning models could be woven into a 'best planning model' for each school.

Comprehensive Rational Model

Given the information presented so far, it is apparent that a comprehensive rational model is unsatisfactory for use in ASOS in Latin America. Lack of sufficient information and

data, uncertainty in continued availability of resources, and high turnover of administrative personnel and board members preclude the possibility of setting definite long-term goals or generation and selection of optimal decision alternatives.

Bounded Rational Model

A more plausible rational approach to planning and decision making would be the bounded rational model proposed by March and Simon (1958). The bounded rational model requires somewhat less generation of alternatives and information upon which to make decisions or find solutions to organizational problems.

This model appears to be in line with the recommendations made by Orr and Seaquist (1968) which have already been discussed at some length. Their suggestion that a systems approach be employed to obtain the data and information needed to develop long-range goals and objectives seems to be a compromise between the rigorous requirements of a comprehensive rational model and the "satisficing" nature of a bounded rational model. In essence they suggest that the ASOS in Latin America should work toward overcoming their informational and goal-setting limitations in order to approach a more comprehensive rational process. This approach may well have merit for those few ASOS which have the organizational ability and means needed to eliminate these shortcomings and move toward a comprehensive rational system of planning.

However, the vast majority of ASOS in Latin America are not presently in a position to meet the requirements of a rational systems approach to decision making and planning. Even the less stringent assumptions associated with a bounded form of rationality pose a considerable problem for these institutions. For example, the high rate of turnover among administrators and board members poses a threat to any planning model which requires long-range goal setting and selection of plans of action which must be closely linked to those long-range goals. The rapidly changing student enrollment in most of the ASOS in Latin America forces many schools to question whether or not they will be able to (or should) continue operating primarily as American-type schools geared toward educating the dependents of U.S. citizens living and working abroad. Given this high degree of uncertainty regarding the very purpose of the school, I do not believe that a purely rational model of planning (whether comprehensive or bounded) is feasible or particularly desirable among the ASOS in Latin America. Rather than attempting to convert themselves to purely rational decision makers and planners (a conversion of some magnitude in many of these schools), they should consider using a planning model which is better suited to their particular needs and provides a greater deal of flexibility.

Disjointed Incrementalism

One such less demanding model of decisionmaking is embodied in the strategy of "disjointed incrementalism" first proposed by Lindblom (1959). Recognizing some of the pitfalls inherent in the rational goal-driven model, disjointed incrementalism attempts to adapt decision-making strategies to the limited cognitive capacities of decision makers and to reduce the scope and cost of information collection and computation. Disjointed incrementalism, therefore, offers a gradual piecemeal approach to decision making and planning in situations where a rationalistic approach is unfeasible.

At first glance disjointed incrementalism appears to offer a viable alternative to the rational planning model for ASOS in which rational planning is poorly suited to the school's needs and abilities. The incrementalist strategy obviates the need for generating great quantities of information and data upon which to formulate comprehensive long-range plans. Incrementalism also permits the school to make decisions based only upon currently

available information, reflecting the current status of the school amidst rapidly changing student enrollment and administrative personnel.

Although most ASOS are unable to formulate rationally long-range, all-encompassing goals and objectives to which they blindly pledge allegiance, they do require some planning which sets basic directions and provides some degree of continuity. Without some continuity based on intermediate- to long-range plans, the schools would change direction every time a new administrator or board member took office (which, as has been previously demonstrated, is quite frequent in these schools).

It is this ongoing need for continuity and general direction among ASOS in Latin America which a disjointed incrementalist approach is unable to satisfy. As Etzioni (1967) pointed out:

> While incremental decisions greatly outnumber fundamental ones, the latter's significance for societal decision-making is not commensurate with their number; it is thus a mistake to relegate non-incremental decisions to the category of exceptions. Moreover, it is often the fundamental decisions which set the context for the numerous incremental ones. (p. 387)

It appears, therefore, that the majority of ASOS in Latin America require a planning model which incorporates the ability to provide continuity and basic direction, while simultaneously providing the needed flexibility for decision making on an incremental basis to deal with short-term needs as they arise in an ever-changing school environment. Etzioni (1967) appears to have had just such a system in mind when he said:

> Thus, while actors make both kinds of decisions, the number and role of fundamental decisions are significantly greater than incrementalists state, and when the fundamental ones are missing, incremental decision-making amounts to drifting-action without direction. A more active approach to societal decision-making requires two sets of mechanisms:
> (a) high-order, fundamental policy-making processes which set basic directions and
> (b) incremental processes which prepare for fundamental decisions and work them out after they have been reached. This is provided by mixed-scanning. (p. 388)

Mixed-Scanning Approach

The mixed scanning approach (Etzioni, 1967) combines elements of both the rationalistic and incremental models in a manner which maximizes the usefulness of both in varying situations. Etzioni (1967) explained that:

> The strategy combines a detailed ("rationalistic") examination of some sectors --which, unlike the exhaustive examination of the entire area, is feasible -- with a 'truncated' review of other sectors. The relative investment in the two kinds of scanning -- full detail and truncated - as well as the very act of scanning, depends on how costly it would be to miss, for example, one hurricane (i.e., one important future event-author); the cost of additional scanning; and the amount of time it would take. (p. 389)

Based upon the characteristics of American Sponsored Overseas Schools (i.e. changing enrollment, rapid turnover of administrators and board members, and the individual/autonomous nature of the schools), I believe that the mixed-scanning approach represents the best model for planning and decision making for those schools. Unlike the rationalistic models, mixed-scanning requires comprehensive, long-range decision making only in those instances where a much more abbreviated (or truncated) examination indicates the need for such. In ASOS, for example, the need for continuity and basic direction would provide a specific focus for the school to invest the time and resources to develop longer-range and more comprehensive plans. It would not, however, make demands upon each school (demands which, as previously shown, most ASOS cannot meet) to develop such long-range comprehensive plans for all possible contingencies.

A second advantage of the mixed-scanning approach for ASOS is the built-in flexibility of the incrementalist component. Much of the time and resources saved by limiting the scope of rationalistic planning could be diverted to the incrementalist component of the mixed-scanning design. This would allow ASOS to monitor more closely the current status of rapidly changing events and needs, as well as to assist in determining which events and needs require further study and contingency planning. Without sacrificing continuity or basic direction, the schools could keep better appraised of fast-breaking situations which require immediate (and potentially longer-range) action.

A third aspect of the mixed-scanning approach which lends itself to use by ASOS is the ability of each school to determine what proportions of rationalistic and incremental planning are optimal for its own situation. Those ASOS which are further developed and more stable may decide to allocate a greater deal of time and resources into long-range rationalistic planning, while those schools still finding themselves may benefit by investing the majority of their effort into a more incremental approach. The mixed-scanning model allows each individual institution to make this determination according to its current and (perceived) future needs.

In summary, of all the major planning models considered, Etzioni's mixed-scanning approach appears to hold the greatest potential benefit for American Sponsored Overseas Schools in Latin America. By avoiding rigid adherence to either the traditional rational models or the piecemeal incremental model, mixed-scanning provides the needed ability to provide continuity and basic direction without eliminating the flexibility of being able to deal with rapidly changing conditions within the school.

References

Beach, R. H., & McInerney, W. D. (1986). Educational planning models and school district practice. *Planning and Changing, 17*, 180-191.

Clark, D. L. (1981). In consideration of goal-free planning: The failure of traditional planning systems in education. *Educational Administration Quarterly, 17*(3), 42-60.

Cohen, M. D., March, J. G., & Olsen, J. P. (1972). A garbage can model of organizational choice. *Administrative Science Quarterly, 17*(1), 1-9.

Conlan, A. L. (1982). The contributions of American sponsored overseas schools in fostering, promoting, and maintaining cross-cultural understanding between and among the peoples of the Americas (Doctoral dissertation, The University of Alabama). *Dissertation Abstracts International, 43*, 1494A.

Etzioni, A. (1967). Mixed-scanning: A "third" approach to decision-making. *Public Administration Review, 27*, 385-392.

Lindblom, C. E. in Faludi, A. (Ed.). (1973). *A reader in planning theory*. Oxford: Pergamon Press, 151-169.

Luebke, P. T. (1976). *American elementary and secondary community schools abroad.* Arlington, VA: American Association of School Administrators.

Mandrell, J. E. (1980). Perceptions of administrators of American sponsored overseas schools in Mexico and private schools in Alabama as related to teacher-selection criteria (Doctoral dissertation, The University of Alabama). *Dissertation Abstract International, 41*, 3356A.

Mannino, E. N., & Connor, F. E. (1966). *The mission called DODS: A firsthand look at American-sponsored schools in other lands.* Washington, DC: American Association of School Administrators.

March, J. G., & Simon, H. A. (1958). *Organizations.* New York: Wiley and Sons.

Orr, P., Jr. (1983). An analysis of what constitutes U.S.-type schools in the American sponsored overseas schools of Mexico (Doctoral dissertation, The University of Alabama). *Dissertation Abstracts International, 44*, 2315A.

Orr, P. G. (1974). *A research matrix: The American sponsored overseas school.* Buzzards Bay, MA: Center for International Education.

Orr, P. G. (1976). *A guide to school board policy: The American sponsored overseas school.* Buzzards Bay, MA: Center for International Education.

Orr, P. G. (1980). *Dependent schooling abroad and the United States corporation.* University, AL: Bureau of Educational Services and Research.

Orr, P. G. (1982). *World enrollment trends by region in American-sponsored schools: 1973-1980.* University, AL: International Education Associates, Inc.

Orr, P. G., & Conlan, A. L. (1984). *Contributions of American sponsored overseas schools to improve international and intercultural relations.* Tuscaloosa, AL: International Education Associates, Inc.

Orr, P. G., & Kling, M. (1982). *A planning and administrative guide for the Association of American Schools in South America.* University, AL: International Education Associates, Inc.

Orr, P. G., & Seaquist, R. G. (1968). *The bi-national schools: A planning base for schools in Colombia and Haiti.* University, AL: Bureau of Educational Services and Research.

Patterson, C. J. (1969). *First handbook of overseas schools.* Mexico City: American School Foundation.

Roth, R. M. (1973). Personal characteristics of the overseas chief school administrator and the relationship of these characteristics to the type of his school and its geographic location (Doctoral dissertation, Temple University, 1971). *Dissertation Abstracts International, 33*, 120A-121A.

Simon, H. A. (1983). *Reason in human affairs.* Stanford CA: Stanford University Press.

Tanner, C. K., & Williams, E. J. (1981). *Educational planning and decision making.* Lexington MA: D.C. Heath and Co.

United States Department of State, Overseas Schools Advisory Council, Office of Overseas Schools. (1987). *Fact sheet, 1986-1987.* Washington, DC: U.S. Government Printing Office.

Vargas, M. (1980). Job acceptance and job satisfaction: A study of chief administrators of American-sponsored overseas schools in Latin America (Doctoral dissertation, The University of Alabama). *Dissertation Abstracts*

Weick, K. (1976). Educational organizations as loosely coupled systems. *Administrative Science Quarterly, 21*, 1-19.

Weick, K. in Tyler, W. (1988). *School organisation: A sociological perspective.* London: Croom Helm.

THE NECESSITY OF ENVIRONMENTAL SCANNING PRIOR TO LONG RANGE PLANNING ACTIVITIES AT HIGHER EDUCATION INSTITTIONS

> *Much of the current crisis in education has its roots in an inability of colleges to get beyond a "now-oriented" approach to problems within the educational system. It is time for the educational focus to be directed toward anticipating alternative futures since the application of selected perspectives and procedures drawn from the field of futurism offers a powerful means of renewal for the educational enterprise.*
> (McMullen, 1985, p. 1).

There is a need for environmental scanning at all institutions of higher education. This need becomes paramount when one considers the increasing employment of strategic planning practices in education. Strategic planning by higher education institutions is not just a passing fancy. The strategic management perspective has, to a considerable degree, enveloped the thoughts, attitudes and actions of a significant proportion of today's college and university administrators. Adapted from the business community where it is utilized to help businesses "increase performance through improved effectiveness, efficiency, and flexibility" (Smith, Arnold, & Bizzell, 1988, p. 3) strategic planning is utilized by many colleges and universities as an administrative tool to aid in accomplishing one, several or all of the following; institutional mission definition, goals identification, evaluation of internal strengths and weaknesses, identification of external threats and opportunities, creation and selection of appropriate alternative strategies and post-planning monitoring and control operations. A smaller minority of institutions effectively integrate strategic planning with futures forecasting and scenario development. It is these institutions which are at the cutting edge of the strategic planning process and who are poised to recognize early significant environmental change and capitalize on the resulting opportunities while minimizing the impacts of emerging threats.

The Need For Foresight

Imagine the competitive advantage a university would have if it knew which areas of study would be most in demand twenty years from now, the type of research the federal government would be sponsoring fifteen years from now, or the impact of changes in state politics five years from now. The institution that has insight into these areas has a significant advantage over competing institutions who "fly by the seat of their pants". Ellison and Smith (1985) note that in a period of time characterized by a sluggish economy, decreasing student enrollments, an increasing rate of change, proliferating technologies, global competition, and sociopolitical pressures and challenges it becomes ever more important that institutions engage in a form of strategic planning which focuses on the interaction of the institution with its external environment. Caldwell (1988) calls on institutions of all types to make informed decisions on the basis of key external and internal trends and to evaluate their internal strengths and weaknesses in light of external threats and opportunities. In short, he asserts that the best strategic planning is accomplished following futuristic foresight.

Morrison, Renfro, and Boucher (1984) state that information about the future is valuable because it allows us to create a better future than would otherwise occur. Even

though our ability to anticipate the future is faulty at best, the insight gained by developing a forecast provides valuable information regarding potential events. But as Morrison and his colleagues suggest, educators build solid reputations based upon strict adherence to traditionally established rules and procedures and futures forecasting, based in large part upon subjective reasoning, often goes against the grain of sound research. How then does an institution implement a strategic planning process which makes informed use of futures research? The answer lies in environmental scanning.

Environmental scanning finds its roots in the work of A. Etzioni (1968) who identifies what he calls "mixed-scanning" as an effective approach to decision-making. The term mixed-scanning is coined to describe a decision-making process where first there occurs a general overview of the environment in which a decision is to be made with emphasis placed on identifying factors with great potential for influencing the effectiveness of the decision. This surface-scan to identify factors is followed by a more in-depth scan which seeks to clarify the potential impacts of each significant factor.

The Role of Environmental Scanning

Environmental scanning is a term which has varying degrees of meaning. In its simplest and most undeveloped form environmental scanning refers to any unsystematic search for information on an emerging trend. Thus when the dean of the college of education sends a graduate assistant to the library to "bring me everything you can dig up on outcomes assessment" the dean is indeed performing an environmental scan. In the context of this paper, however, the term environmental scanning takes on a more formal meaning - the deliberate and systematic identification of emerging or potential trends or forces which may have a substantial impact on the efficiency or effectiveness of an institution in the years to come. Morrison, et al. (1984, p. 18) see scanning as "a process of screening a large body of information for some particular bit or bits of information that meet certain scanning criteria" and identify the following scanning steps:

1) searching for information resources
2) selecting information resources to scan
3) identifying criteria by which to scan
4) scanning and,
5) determining special actions to take on the scan's results.

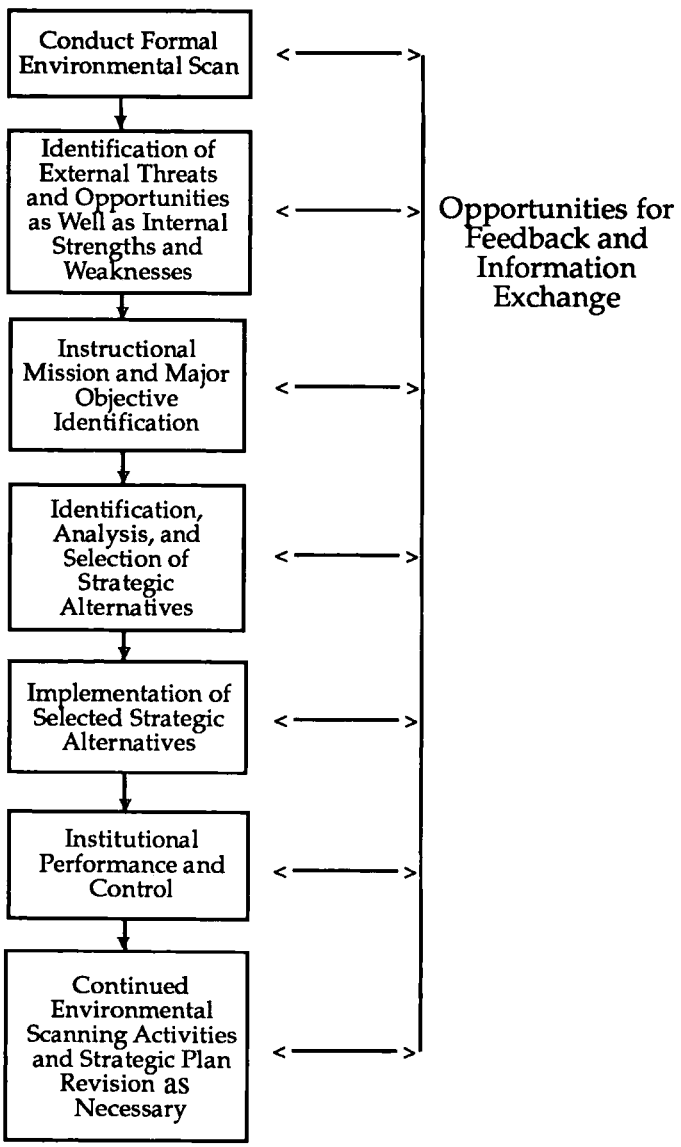
While numerous methods of implementing scanning programs exist, Morrison and his colleagues note that "the most popular of the formal systems by far is through an in-house, interdisciplinary, high-level committee of four or five members (but no more than 12 or so)" (p. 16). Generally, a scanning taxonomy is developed and the scanning results are logically classified within this structure. Morrison, Renfro, and Boucher (1983) identify four areas which should be scanned. These are; economic developments, technological innovations, social change, and legislative and regulatory developments. A fifth area, activities of competitors, probably deserves scanning as well. Items identified by the scan and selected as important by the committee are summarized and distributed to key personnel whose work will likely be impacted by the emerging trend or force.

The relationship of environmental scanning with strategic planning is diagramed below. Environmental scanning is a necessary forerunner to the remainder of the planning process as it aids the planners' external awareness and assists them in positioning their institution in relation to its environment. Note also, however, that the scanning process does not end at this point. Formal scanning activities continue beyond the strategic planning period as an aid in the monitoring and control of the implemented strategic plan. This helps to ensure that significant changes and/or new developments in the environment are identified and their

potential impacts are considered. In some cases, events will be significant enough to warrant changes in the strategic plan.

Figure 1

A Strategic Planning Process



Adapted From: Smith, G. D., Arnold, D. R., & Bizzell, B. G. (1988). *Business Strategy and Policy* (2nd Edition). Boston, MA: Houghton Mifflin.

The Benefits of Environmental Scanning

The primary purpose of environmental scanning is to provide key administrators valuable external information regarding both the probability and the potential impact of volatile external trends and forces. This information, acquired prior to identification and selection of a strategic plan of action, is then used to both develop and critique the various strategic alternatives foreseen by the administration. When considered in light of the institution's internal strengths and weaknesses it is hoped that viable plans of action emerge. Thus, a major benefit of environmental scanning is that it encourages a proactive management style rather than a reactive management style and administrators are provided the opportunity to respond to developing trends before they become critical events.

A second benefit of environmental scanning is the unifying force it can have upon key members of the administration and faculty. As key personnel scan for these trends and forces or receive executive summaries of environmental scans for their thoughts and comments a camaraderie results from the recognition that the future direction of the university is in our hands and that we, as a team, will decide the future direction of our school. This team concept, in which each player has access to the entire body of knowledge shaping the school's direction, replaces the less effective planning model in which one office, or worse yet one individual, is responsible for developing the strategic plan which is then filed on a shelf in the president's office.

A third benefit of a formal environmental scanning program is that it constitutes an inexpensive, yet effective, form of professional development which serves the institution's interest in maintaining a state-of-the-art leadership team aware of current research, viewpoints, trends and activities which may be of value in assisting the administrator in solving current problems and/or more efficiently carrying out his/her duties. A primary goal of professional development is to keep leadership current and up-to-date with regards to the field of their expertise as well as higher education in general. By having administrators focus a majority of their scanning efforts on their area of expertise this goal is achieved. Additionally, the on-going dialogue between the various scanners regarding their findings provides administrators with creative insights into their fields and challenges them to analyze their attitudes and policies in light of the larger educational picture.

The Costs of Environmental Scanning

Having identified the benefits of environmental scanning, what then are the costs? The financial resources required to implement a scanning program would seem to be minimal. Key personnel will probably already be receiving most of the various journals and newspapers identified for scanning. An existing office, such as the department of institutional research, can coordinate the search, and the addition of one secretary or a few graduate assistants (think of the educational value for GA's) to maintain the files and develop summaries of the articles are all that is required.

It would seem reasonable to expect a broader distribution of power to exist at an institution using environmental scanning. As key personnel contribute to the scanning database opinions will form, and these opinions will be marketed to others with the result being a feeling of empowerment and control not found in institutions whose chief executive officer calls most of the major shots with other officials acting in, at best, an advisory capacity. This result is likely to be viewed as a cost only in the eyes of those who must make sacrifices to the "new management."

Third, it can be envisioned that the burden of anticipating the future and developing long-range plans to capitalize on the likely state of the future environment may add an

additional stress factor to those at the decision-making level. This stress is a result of the recognition of increased responsibility for the future of the school as well as the realization that key decisions are being made upon information containing a large element of uncertainty. This additional stress, however, may be partly or even completely mitigated by the success of strategic planning. One would expect fewer critical situations needing immediate attention as a result of foresight and the fire-fighting role of management is one of the managerial roles which creates great stress. Additionally, a structured method of identifying future trends and collecting information on those trends provides a database which can offer comfort to those making a decision. Administrators may be able to reduce the pressure by recognizing that, even though uncertainty exists, they have made as informed a decision as possible.

Finally, faculty and administration who criticize the methodology of scanning as unscientific will come to see the process as more than just a search for the truth. They will come to see environmental scanning as a procedure for enhancing the value of the institution and for awakening it to the realities of its existence in an oft times hostile environment. In a sense, they will come to see it as a "review of the literature" which allows hypothesis formation around the question of "How do we make this institution a better institution and one that is better able to live up to the expectations of its constituencies?".

In conclusion, it seems apparent that the benefits of an environmental scanning program far outweigh the associated costs. In a world where external forces arguably have a greater impact on the success or failure of an institution to achieve its long-range goals than do internal forces, strategic planning without sufficient attention to the identification and consideration of emerging trends and forces leaves much to be desired. Environmental scanning, for reasons previously identified, is the most appropriate way to encourage this proactive style of administration and therefore it is strongly recommended that all institutions of higher education implement a formal environmental scanning program. The remainder of this paper considers three institutions engaged in differing forms of environmental scanning and identifies the strengths and weaknesses of each program.

A Consideration of Three Environmental Scanning Programs

To illustrate the variety of scanning methodologies currently in existence in higher education, programs at three diverse institutions have been selected for review. Programs at a community college, a land-grant institution and a major urban university, have been chosen so that the application of environmental scanning at different types of higher educational institutions becomes apparent. Strengths and weaknesses of each program are pointed out, however, it is noted that any environmental scanning program is an improvement over not having such a program.

DuPage County Community College

In April of 1989, the Futures Committee of DuPage County Community College published the results of a project designed to give direction to the institution as the twenty-first century approaches (Futures Committee of College of DuPage, 1989). This committee was created by the college president, made up of 26 key administrators, faculty, and students who were selected from 70 applicants, and charged to, among other things:

1. Identify the college's strengths and emerging opportunities,
2. Develop a vision statement on where the college should be by the year 2000, and
3. Make recommendations consistent with the vision for implementation.

Environmental scanning was chosen as the method by which the committee would seek to identify its emerging opportunities. The committee sought information about four areas of their external environment. These were Demographic/Land use, Business/Industry,

Government, and Education. An environmental workshop lasting three hours was held during which key issues within each of these areas were identified. An additional outcome of this workshop was the decision to utilize the expertise of special interest groups and to obtain their ideas as to external opportunities available for DuPage Community College. Such groups included the College's Board of Trustees, alumni, and community business leaders. Following the workshop, a two-day retreat was held during which the ideas developed during the workshop were polished and a preliminary school vision was created. Following this first retreat input was solicited from the special interest groups identified during the workshop. A second retreat was then scheduled and the process of finalizing the vision statement was begun.

The positives to note from this attempt at environmental scanning are numerous and include:

- Strong presidential support resulting in a feeling of empowerment by the Futures Committee,
- A committee composed primarily of high level administrators and faculty who are in the best positions to utilize the findings of the scan,
- A scanning workshop designed to introduce committee members to environmental scanning, its role, and the contribution it can make to effective planning,
- The use of Special interest groups to gain a broader perspective as well as provide the opportunity for additional expertise which can more accurately interpret potential opportunities,
- A rather large scanning committee (26 persons) which allows for both a variety of perspectives regarding issues as well as focused attention by several individuals on a single topic.

Some negative aspects of the scan include:

- The scan was an isolated event. Thus the college loses the ability to continually monitor changes in the opportunities identified as well as to identify newly emerging opportunities,
- The scan focused solely on college strengths and external opportunities. No attention was paid to identifying institutional weaknesses and emerging threats which may undermine the effectiveness of the institution.

The University of Georgia

The Public Information Office at the University of Georgia publishes *Georgia Morning* on a daily basis (Handy, July 1990). The publication is prepared by two work/study undergraduate students who have been charged with scanning four local and regional newspapers and clipping every article dealing with higher education, the University of Georgia, or its employees. This they do on a daily basis between the hours of 5:30 am and 9:00 am. The articles are given to the Director of Public Information who prioritizes them, has them copied, and sees that they are distributed to 48 key administrators by 9:30 am each morning.

The primary positive associated with this scan is the timeliness of the information provided. Each day, administrators can track the development of an issue(s) which may have implications for the performance of their job duties. Additional positive aspects include:

- Cost efficiency -- The cost of the program is minimal as work/study students generate the document,
- Wide distribution -- 48 key administrators receive the document each day, thus increasing the probability that all areas impacted by an issue have an opportunity to keep up with it,
- Good coverage of regional developments in higher education as reported by the press.

Negative aspects of the scan include:

- Exposure to bias -- By allowing one individual to prioritize the articles important issues may be deemed unworthy on the basis of one opinion,
- Lack of National Focus -- Emphasis on regional newspapers limits ability to identify significant national trends and issues,
- Lack of source breadth -- By focusing solely on newsprint, valuable data from other sources is missed,
- Lack of formal feedback -- Failure to have formal feedback channels limits opportunities for improving the publication, suppresses dialogue regarding significance of the issues, and encourages disregard for the publication,
- Lack of Presidential Support -- As a publication of the Public Information Office, the publication lacks the presidential support valuable in giving the scanning program an "air of authority",
- Low-level scanners -- The use of student workers as scanners may be inexpensive, but it gives administrators an incentive to gloss over the material without digesting its importance. Were the administrators performing the scan, they would spend much more time evaluating the impacts of their findings.

The University of Akron

One of the most formalized college-based scanning programs in the nation is the Ohio Issues Scanning Program organized by the Center for Urban Studies and the Institute for Futures Studies and Research at the University of Akron (Handy, June 1990). One of approximately 15 such state-supported scanning programs contributing to the State Scanning Network, the Ohio Issues Scanning Program is unique in that it is the only member of the State Scanning Network operated out of a university rather than a governor's office. Members of the network come from the University, the State Government, and major Ohio-based profit and non-profit institutions. The Scanning Network meets bimonthly to identify, discuss and select emerging issues and trends expected to impact Ohio policy makers. These issues are researched and a publication, *The Ohio Foresight,* is prepared and distributed to over 1000 public and private policy makers. *The Ohio Foresight* includes articles summarizing the issues deemed appropriate by the Scanning Network to provide guidance in developing effective policy. As a supplement to the Ohio Scanning Network the Program conducts a statewide round table discussion series around emerging issues identified by the scanning activities.

Members of the network, are to have a prepared list of scans to nominate during the issue identification stage of each meeting. If the scan is perceived by the network to have significant ramifications for public policy, it will be included in some detail in a bimonthly report. Generally, 4-6 such scans are identified bimonthly. The proponent(s) of an accepted scan may then be asked to construct the lead sentence around which the network staff will write the findings of their research. In addition to scans developed within the network, scans produced by one of the other state-wide scanning programs are reviewed and may be included in the bimonthly report.

Numerous positives can be extracted from the scanning program's procedures including:

- The support of the state governor who lends a "degree of value" to the network's efforts,
- The Network's charge to members to identify important scans, thus insuring active participation of high level policy-makers in the program and encouraging reflective thought about their findings,
- Frequent meetings (bimonthly) which are efficiently organized and allow for continued monitoring of emerging trends and issues,
- The use of roundtable discussions to generate feedback from non-members of the network which can be used both to make others more aware of the program as well

as to continuously refine the scanning technique,
- The network seeks to identify and use valuable scans performed by other scanning organizations rather than reinventing the wheel.

While the scan is intended for a broader audience than University of Akron constituencies, some negatives can be considered:

- No procedural connection exists between the scan results and policy planning. That is, it is hoped officials use the information, but it is not required that they defend their decisions in light of the scans,
- The procedure is somewhat expensive and requires funding from outside agencies and foundations,
- Scans are made available to university officials on request. Scans on issues of relevance to specific areas of the institution are not automatically forwarded to those areas. There are probably areas within the university which might benefit but are unaware of the scans' existence.

Conclusion and Recommendations

As evidenced by the above selected programs, environmental scanning can take on a variety of methodological forms. While advocating the exact format of an effective scanning program would be inappropriate, several well-founded suggestions can be made:

1) visible support of the chief executive officer is needed,
2) active participation of key administrative personnel is desirable,
3) meeting frequency should be sufficient to maintain interest in the program,
4) results of scanning activities should be made available to as wide an audience as possible, and,
5) the scanning program should be formally linked to the strategic planning activitiesof the institution.

Administrative attention which focuses on the development of a scanning program which incorporates all of the above suggestions is likely to result in a highly effective program which not only aides the strategic planning process but also contributes to the development and morale of professional faculty and staff as well as fosters the development of a community of purpose within the institution.

References

Caldwell, R. L. (1988). *Foresight: Definition and need for Arizona universities.* Phoenix, AR: Arizona Board of Regents. (ERIC Document Reproduction Service No. ED 306 821)

Ellison, N. M., & Smith, J. D. (1985). *Implementing strategic planning: A case study of planning for institutional change at Cuyahoga Community College.* Cleveland, OH: Cuyahoga Community College. (ERIC Document Reproduction Service No. ED 279 369)

Etzioni, A. (1968). *The active society: A theory of societal and political processes.* New York: The Free Press.

Futures Committee of College of DuPage (1989). *Toward the 21st century: A vision for College of DuPage.* Glen Ellyn, IL: College of DuPage. (ERIC Document Reproduction Service No. ED 306 975)

Handy, T. (1990, June). [Telephone interview with Jan Grell, Project Director of Ohio Issues Scanning Program at the University of Akron].

Handy, T. (1990, July). [Telephone interview with Tom Jackson, Director of Public Information at the University of Georgia].

McMullen, H. G. (1985). *The well-futured college: Reaching for tomorrow—today.* Southern Association of Community and Junior Colleges Occasional Paper, Volume 3, Number 2. (ERIC Document Reproduction Service No. ED 257 488)

Morrison, J. L., Renfro, W. L., & Boucher, W. I. (1983). *Applying Methods and Techniques of Futures Research.* New Directions for Institution Research Report No. 39. San Francisco: Jossey-Bass.

Morrison, J. L., Renfro, W. L., & Boucher, W. I. (1984). *Futures Research and the Strategic Planning Process: Implications for higher education.* ASHE-ERIC Higher Education Research Report No. 9. Washington, D.C. :Association for the Study of Higher Education.

Smith, G. D., Arnold, D. R., & Bizzell, B. G. (1988). *Business Strategy and Policy* (2nd ed.). Boston, MA: Houghton Mifflin.

GETTING RESULTS: IS BONA FIDE STRATEGIC PLANNING MORE EFFECTIVE?

A major challenge confronting public school administrators is to restructure schools, refocus goals, and to develop curricula and organizational structures that are more responsive to the needs of the student, community, and world in a changing interdependent global society. Planning has long been recognized in the literature of school administration as an important element in bringing about school improvement (Knezevich, 1984; Kaufman, 1988). Traditionally, emphasis has been on operational planning within limited time frames. However, current pressures for change are coming from a dynamically changing environment in which resources are limited (Groff, 1983). The result has been a growing emphasis on strategic planning.

Writers have struggled to define strategic planning by contrasting it with other forms of planning. The term has many definitions but all seem to include at least two phases: (1) a mission and goal-finding process that is based on an examination of the environment and an appraisal of organizational strengths and weaknesses, and (2) an implementation process that attempts to realize the mission through the effective use of resources. This latter phase is often called strategic management (Cope, 1981, 1987.)

Strategic planning is a specific type of long-range planning, originally conceptualized in the business world, that facilitates change and leads in the direction of restructuring (Collier, 1981; McCune, 1986). One example of the use of strategic planning can be found at the Littleton High School, Littleton, Colorado. According to Brickley & Westerberg (1990) project plans to restructure Littleton, beginning with the freshman class in the fall of 1991, began in the fall of 1987 when the "district was engaged in a strategic planning process that yielded four district priorities, one of which was 'restructuring' (p. 29)." The principal and 35 members of the staff formed "Direction 2000: Rethinking the American School" in the fall of 1988. Direction 2000 was a response to a report written by ten members of the faculty "calling for the restructuring of the purposes, goals, and organization of high school education (1990, p. 29)." The restructuring plans that have resulted will create "what could be the first truly alternative comprehensive high school in this country (1990, p. 28)."

Applications of Strategic Planning in Education

According to McCune, when strategic planning began to be adopted by schools in the late 1970s emphasis tended to be placed on planning itself (1986, p. 31). In some districts environmental scanning was simply added to a district's long-range planning process. McCune continued:

> Other districts and schools have used parts of the strategic planning process, such as the analysis of internal organizational capacity to develop general improvement plans. These districts did not link their planning to respond to the needs of the larger community. However, some districts understand the potential of strategic planning to bring about organizational transformation. They have applied the technique not only to planning but also to restructuring programs (1986, p. 31).

Persons writing about applications of strategic planning in education have raised as an issue the question of whether or not strategic planning, as conceptualized in the business world, can be practiced in K-12 school districts. Concerned that education lags behind others fields in utilizing strategic planning, Bozeman and Schmelzer compared the applications of strategic planning in business and industry with applications in education, noting the

problems associated with applying the process in education (1984). In a doctoral study of strategic planning in urban school districts, McNeight(1980) found that an important limiting factor was insufficient allocation of district funds. His research also noted a contributing factor to be insufficient funding of the budgetary requirements imposed on school districts by other governmental units. Fredrickson (1983), in an article on how strategic decision making is affected by organizational structure, commented on how strategic problems or opportunities may not be recognized in school districts because of their structure as "professional bureaucracies". Even McCune, in advocating strategic planning for K-12 school districts, observed that strategic planning in any public agency is a slower process than in business (1986).

Reporting on ASCD's elementary and high school futures networks, Cawelti (1986) described strategic planning as a way for schools to respond to changes in demographics, the marketplace, technology, and knowledge. He wrote: "Strategic planning is a system for analyzing as many as possible of these forces, trends, and issues and factoring their influence into subsequent decisions" (1986, p. 1). Noting that the strategic planning process does not always work, he cited as a reason that "more nicely wrought long-range plans are resting on shelves than guiding fundamental changes in schools (1986, p. 12)." While advocating strategic planning for schools as a way to bring about needed change, he also stated: "Completing all of the stages of strategic planning, especially in the organizational analysis sector, simply increases the probability of significant improvement" (1986, p. 12).

In fact, certain inherent features of K-12 school districts may make the successful practice of strategic planning difficult. An example of this might be the financial and programmatic constraints created by the responsibility of districts to implement programs mandated by state and federal governments. Another example might be the reluctance of local boards to support strategic planning because of not wanting decisions to obligate future boards. Perhaps the process can not and does not need to be practiced in school districts as it was conceptualized in the business world in order to be effective in terms of results and satisfaction. On the other hand, perhaps less bona fide strategic planning is less effective.

Bona Fide Strategic Planning

An important question here is whether K-12 school districts using bona fide strategic planning obtain better results and experience greater satisfaction with those results than school districts using less bona fide strategic planning. Whether or not a district is using a bona fide or less bona fide strategic planning process can be evaluated in two ways: (1) Does the strategic planning process adopted by the district include all recommended steps (McCune, 1986), (2) Does implementation of that process reflect all the factors that differentiate strategic planning from traditional long-range planning (Meredith, Cope, & Lenning, 1987).

Steps in the Strategic Planning Process

McCune (1986), author of one of the first monographs on strategic planning for K-12 school districts, recommended a series of steps and offered this definition:

> Strategic planning is a rational process or series of steps that move an educational organization through:
>
> 1. understanding the external forces or changes relevant to it;
> 2. assessing its organizational capacity;
> 3. developing a vision (mission) of its preferred future as well as a strategic direction to follow to achieve that mission;
> 4. developing goals and plans that will move it from where it is to where

it wants to be;
5. implementing the plans it has developed; and
6. reviewing progress, solving problems, and renewing plans (p. 32).

Having offered that definition, McCune argued that strategic planning was more than a mechanistic planning procedure; in the broadest sens, it was an organizational development experience, a management process for changing and transforming organizations. She wrote:

> Strategic planning is a process for organizational renewal and transformation. This process provides a means of matching services and activities with changed and changing environmental conditions. Strategic planning provides a framework for the improvement and restructuring of programs, management, collaborations, and evaluation of the organization's progress (1986, p. 34).

One way for a school district to classify its strategic planning process as bona fide or less bona fide would be to analyze the district's process in light of McCune's suggested six steps.

In practice, a school district wanting to use a strategic planning process, in the interest of saving money and time, might eliminate something like the environmental scanning step, or "understanding the external forces or changes relevant to it," for example. Elimination of that step would create a less bona fide strategic planning process. If results and satisfaction are greater when districts use a bona fide strategic planning process, then school districts would be advised to allow sufficient funding and time to insure that the process will be as bona fide and therefore as effective as possible.

Factors Differentiating Strategic Planning from Traditional Long-Range Planning

Strategic planning is more common in higher education than in K-12 education. Even in higher education the strategic planning process differs from campus to campus and what is called strategic planning may be a mixture of elements of strategic planning and planning as usual. Meredith, Cope, and Lenning (1987, 1988) in a recent three-stage research study with a national sample, focused on strategic planning in higher education institutions.

In the first stage of the study 172 of the 196 responding institutions (87 per cent) reported that they were doing strategic planning. The follow-up second stage of the study featured an index designed to differentiate bona fide strategic planning from other planning. Results indicated that, according to the index, perhaps only a third of those institutions were actually doing bona fide strategic planning. The third stage of the study focused on whether or not higher education institutions doing bona fide strategic planning experienced greater satisfaction and obtained better results from the process than participants in planning processes that were less strategic according to the index. The results of the third stage of the study were:

Respondents from institutions following more strategically oriented planning processes reported: (1) more satisfaction, (2) believed they were getting better results, and (3) the analysis of funds available after six years for education and general expenses increased more rapidly for those institutions engaged in bona fide strategic planning (1988, p. 1). Factors differentiating strategic planning from traditional long-range planning were used as the basis for most of the index items, with the addition of some items that are important in order for strategic planning to succeed (Meredith, Cope, & Lenning, 1987). This method of differentiating bona fide strategic planning from other kinds of planning was developed and the factors were enumerated by Lenning (1982). These key factors are presented in the following table. Another way for a school district to classify its strategic planning process as bona fide or less bona fide would be to analyze the district's planning process in light of these factors.

FACTORS DIFFERENTIATING STRATEGIC PLANNING FROM TRADITIONAL LONG-RANGE PLANNING

Traditional Long-Range Planning	Strategic Planning
1. Emphasizes stability	1. Dynamic and change oriented
2. Tradition-oriented	2. Mission-oriented
3. Budgets and governance structure heavily influence results	3. Open and participative in terms of influence on results
4. Concrete and objective data emphasized	4. Subjective and intuitive data emphasized
5. Blueprint for the future, of future decisions	5. Vision of the future, to guide decision-making today
6. Deductive and analytical	6. Inductive and integrative
7. Product oriented	7. Process oriented
8. Focuses on extrapolation	8. Anticipative, tries to anticipate sudden and not-so-sudden changes
9. Future-decisions orientation, looking from where we are now	9. Current-decisions orientation, looking from here we are now the future
10. Reactive	10. Proactive
11. Inaction when there is ambiguity	11. Entrepreneurial and action-oriented even when there is ambiguity
12. Internal focus	12. External focus
13. Opportunistic in orientation	13. Opportunity analysis orientation
14. Relies on the tried and tested	14. Emphasizes innovation and creativity
15. Lock-step process	15. Continuous and on-going process
16. Uni-variate	16. Synergistic
17. The most persuasive persons set the direction	17. Consensus-oriented in determining direction direction
18. Institutional strengths and weaknesses are the primary determiners	18. Institutional environment and context are the primary determiners the primary determiners
19. Facts and the quantitative are emphasized	19. Opinions and the qualitative are emphasized
20. Emphasis is on doing things right	20. Emphasis is on doing the the right things
21. Efficiency orientation	21. Effectiveness orientation
22. Science	22. Art
23. Plan	23. Stream of decisions
24. Planning office carries out	24. Institution-wide development
25. Closed and internal focus	25. Open and external focus

Note: Excerpted from Lenning (1982). Figure from Meredith, Cope, and Lenning (1988)

Conclusions

More variations of strategic planning might be expected among K-12 school districts than among higher education institutions. Typical school district organizational structure results in strategic planning being implemented differently than in business. Even when a school district hires a consultant and adopts a particular strategic planning model, how that model is implemented will vary from school district to school district depending upon

administrative strengths, board of education support, and needs of the community.

Strategic planning processes have been used effectively in some school districts to bring about fundamental changes in instructional programs, clients, management, fiscal arrangements, and relationships with the community (McCune, 1986, p. 31-32). Results of the Meredith, Cope, and Lenning higher education study suggest that at most institutions where strategic planning is being conducted, benefits of the process would be greater if persons understood and paid more attention to the distinctions between strategic planning and traditional long-range planning (1988). The benefits would be in terms of outcomes or results as well as participants' satisfaction with the process.

Although further research on outcomes of strategic planning in K-12 school districts is necessary, if a bona fide strategic planning process produces better results at the K-12 school district level also, then the conclusions of the Meredith, Cope, and Lenning study have significance for professors of educational administration and for school district administrators considering strategic planning or frustrated with strategic planning. Professors hoping to educate students about the potential of strategic planning as a process for bringing about restructuring may wish to suggest to prospective administrators that a truncated strategic planning process may not be as effective as a bona fide strategic planning process. Administrators frustrated with a strategic planning process may wish to evaluate, using one of the two yardsticks described in this article, whether the less than satisfactory strategic planning process does or does not represent bona fide strategic planning. Finally, administrators hoping to bring about restructuring through strategic planning may be well advised neither to modify nor to scale down the process. Perhaps only bona fide strategic planning will be effective as an organizational development process, a process that enables leadership to change, transform, and restructure K-12 education.

References

Bozeman, W. C., & Schmelzer, S. (1984). Strategic planning: Applications in business and education. *Planning & Changing, 15* (1), 35-49.

Brickley, D, & Westerberg, T. (1990). Restructuring a comprehensive high school. *Educational Leadership, 47* (7), 28-31.

Cawelti, G. (1986). Elementary, high school futures networks plan schools for life in the 21st century. *ASCD Update, 28* (4), 1, 4-12.

Collier, D. J. (1981). *The concept of strategic decision-making.* Boulder, CO: National Center for Higher Education Management Systems. (ERIC Document Reproduction Service No. ED 272 068)

Cope, R. G. (1981). *Strategic planning, management, and decision making.* Washington, D. C.: American Association for Higher Education. (ERIC Document Reproduction Service No. ED 217 025)

Cope, R. G. (1987). *Opportunity from strength: Strategic planning clarified with case examples* (ASHE-ERIC Higher Education Report No. 8). Washington, D. C.: Association for the Study of Higher Education.

Fredrickson, J. W. (1983). Strategic process research: Questions and recommendations. *Academy of Management Review, 8* (4), 565-575.

Groff, W. H. (1983). *Strategic planning and management for the third wave.* Washington, D.C.: Futuremics International. (ERIC Document Reproduction Service No. ED 233 651)

Kaufman, R. (1988). *Planning educational systems.* Lancaster: Technomic Publishing Company, Inc.

Knezevich, S. J. (1984). *Administration of public education* (4th ed.). New York: Harper & Row.

Lenning, O. T. (1982, November). *Relating strategic planning to recruitment and retention.* Paper presented at National Conference for Higher Education Executives on Strategic Planning for U.S. Higher Education, Los Angeles.

McCune, S. D. (1986). *Guide to strategic planning for educators.* Alexandria, VA: Association for Supervision and Curriculum Development.

McNeight, K. A. (1970). An analysis of comprehensive strategic planning in urban public school districts. (Doctoral dissertation, University of Wisconsin-Madison, 1970). *Dissertation Abstracts International.*

Meredith, M, Cope, R. G., & Lenning, O. T. (1987). *Differentiating bona fide strategic planning from other planning.* (ERIC Document Reproduction Service No. ED 207 329)

Meredith, M., Cope, R. G., & Lenning, O. T. (1988, May). *After six years, does strategic planning make any difference?* Paper presented at the meeting of the Association for Institutional Research Forum, Phoenix.

Jerry J. Herman

STRATEGIC PLANNING: REASONS FOR FAILED ATTEMPTS

Through my twenty years as a superintendent of schools who utilized strategic planning and through my numerous years of service as a consultant in strategic planning, I have analyzed the reasons why some school districts and educational organizations develop successful strategic plans and why others are unsuccessful. This discussion will list and illustrate these reasons, and will present the steps I consider necessary to develop a comprehensive strategic plan.

What Is Strategic Planning?

I believe strategic planning to be long-term planning with a vision. If the vision of "what should be" or "what could be" at some point in the future (usually five or more years) is missing, it is merely long- term planning. Long- term planning without a vision will cause activities to take place, but the organization could very well end with one of the following results:

- Obtain a result that is not helpful or cost effective. Like the mad scientist, you may build an expensive monster while meaning to build a perfect human. Probably the most recent case of inefficiency is the massive over building of public school buildings in the 1960s and 1970s, which are now abandoned due to drastic drops in pupil enrollment in many school districts.
- Unknowingly, obtain a result that is in opposition to where your organization should go. If you wish to travel from Tuscaloosa, Alabama to New York City, you may end up in Chicago, Illinois because you did not have clear specifications related to your destination at the time you planned the trip.
- Perform an excellent action which is not meaningful in the long run. Many times we do a super job of achieving some results which are not meaningful or helpful to the future of the organization. For instance, it is entirely possible (if not probable) to develop a new curriculum guide that will collect dust; or, more seriously, will be used by teachers and prove to be of less quality than the curriculum guide which was replaced.

How Does Strategic Planning Differ From Long Term or Operational Planning?

Operational planning generally deals with tasks that have to be completed immediately or within one year's time. That is, the focus of operational planning is on the here and now. Strategic planning, again, is planning that clearly defines the vision of "what should be" or "what could be" in the organization's future five years: ten years or more into the future. Once the vision of "what should be" or "what can be" is decided upon, planners can describe "what is," or the current state of affairs. This, then, becomes a discrepancy model that identifies the gaps (needs) to be met in the future.

Once the needs are identified, action programs or tactics can be put in place to attain the results required to meet the needs identified by the discrepancy analysis between "what should be" or "what could be" and the "what is" state of affairs in the organization.

Three brief examples will help clarify the differences among strategic, long term and operational planning. Example A will be strategic planning, Example B will be long-term planning, and Example C will be operational planning.

Example A: Concern for the deterioration of the world's environment

If environment strategic planners have a vision of the degree to which the air, water and soil should be "clean" and they define, in detail, the standards and the specifications which define "clean," they can, then, develop data that indicates the discrepancies between "what

should be" or "what could be" and "what is." This information defines the need (gap) between the existing and future desired states.

Once the need(s) is (are) identified, action plans and tactics can be put into place. Some examples are forming a series of coalitions, raising resources to do intensive lobbying of legislatures or obtaining free space and time, or paying for high intensity media coverage of the deteriorating conditions and what must be done to solve the existing poor environmental conditions.

Example B: Exemplary School District has decided to remodel all of its school buildings over the next ten years

Its action plan calls for the passing of a large bond issue, hiring an architect, letting construction bids, and achieving the results desired within the ten-year time frame. The problems arose when the planners did not, prior to the initiation of an action program, reach a consensus vision of "what should be" related to the instructional programs to be offered students 10 to 30 years from the present; and they did not investigate the future of technology as it would impact the curriculum and construction plans 10 to 30 years in the future.

Example C: University of the Misplaced has lobbied and received permission from the legislature to offer a doctoral program, for the first time, at the beginning of the next academic year

Problems exist because the university's planners and managers haven't carefully defined the detailed specifications of the program's delivery system, nor have they defined the student outcomes they wish to achieve and evaluate as students complete their doctoral degrees. Strategic planning, by creating the details of the vision of "what should be" or "what could be," and comparing that vision, in terms of both organizational and student outcomes (results), would have put them in a strong position to enhance the university's reputation by starting with a high quality doctoral program. As it is, one could anticipate many problems and a negative assessment by the field which will develop into a very large hurdle to be overcome by the university in the future.

Now that strategic planning is clearly defined, and the differences among strategic, long-term, and operational planning have been clarified, we turn to the steps involved in developing a comprehensive strategic plan.

Steps Involved in Doing Comprehensive Strategic Planning:

STEP ONE: Decide upon the initial focus of your strategic planning efforts

The initial focus can be (a) societally oriented, (b) total organization oriented or (c) sub-group (such as an individual school building or a department) oriented. If a societal organization is selected, the planners would develop a vision of "what should be" or "what could be" and compare that societal vision to "what is." In this case "society" could be defined as the total environment of the school district or the university, it could be defined as the state in which the institution is located, it could be defined as the United States, or it could be defined as the world.

In any case, once the society has been defined, the vision created and the needs identified, the organization's planners must next determine which pieces of this vision they can influence. Once that is determined, the planners conduct a "what should be" or "what could be" and a "what is" discrepancy analysis for the organization.

Additionally, the sub-units (individual buildings, colleges within the university, departments or other sub-units) would follow the same procedures. However, it is crucial that, at a minimum, the sub-units and the total organization's strategic plans are aligned. That

is, individual schools or colleges may have elements in their strategic plans that differ from those of the school district or the university, but the sub-units' strategic plans (or for that matter, their visions) cannot be in conflict with the total organization's strategic plan.

It is possible to have sub-units become the initial starting place for strategic planning; but, eventually, the entire organization must achieve a comfortable and productive results oriented "fit." The focus should be at least organizational if the preferred societal focus will not be the focus selected. If strategic planners begin at the sub-group level, there likely will be many conflicting elements in the individual sub-groups' visions. At the very least, a great deal of extra effort and resources will be utilized unnecessarily.

STEP TWO: *Develop a consensus of beliefs and / or values that should guide your organization and its strategic planning efforts*

STEP THREE: *Identify those three to six CSFs that are absolutely crucial to your reaching your organization's desired results, achieving organizational excellence or becoming a pure '10'*

Although every organization has numerous functions and a multitude of tasks to carry on, only a very few of these are critical. An example from a few years back, was the requirement at Chrysler Motors to obtain a Federal loan to stay in existence.

Once these limited numbers of CSF's are identified, the planners and managers can use these for the two very important purposes of (1) streamlining the communications of the organization and (2) establishing priorities among the multitude of strategic objectives and actions plans that are to be decided.

STEP FOUR: *Conduct internal and external scans*

That is, the planners should collect factual (hard) data and attitudinal (soft) data within the organization and outside the organization related to demographics, economics, politics, attitudes and other data for the purpose of identifying trends which can be projected into the future. These trends become important aids to the planners who may wish to plan to continue the trends or initiate actions to overcome or reverse the identified negative trends whenever possible.

STEP FIVE: *Develop a consensus vision and a mission statement*

Using the beliefs statement, the identified Critical Success Factors and the scanning data, the planners can now proceed to develop a vision of "what should be" or "what could be," and they can compare that vision to "what is." This discrepancy analysis will allow the planners to identify their desired strategic goals and objectives (results).

The mission statement is developed from the vision, and it is a short guiding statement of the primary purpose or "reasons for being" of the organization. It should never be more than one page in length; it will, preferably, be no longer than a single paragraph.

STEP SIX: *Conduct a strengths, weaknesses, opportunities and threat (SWOT) analysis*

Once the vision and mission are clearly identified, the planners should analyze the strengths, weaknesses, opportunities and threats that exist within the organization as they relate to the probability of achieving the desired vision. A similar analysis should be conducted for the external environment.

Those internal or external strengths that have been identified can be maximized as resources during the planning and action activities of the organization. Weaknesses identified should be looked upon as areas which can be improved, and activities should be begun to overcome the weaknesses. Opportunities exist when planners identify internal or external

conditions or resources that have not been tapped and for which the probability exists to strengthen the organization by taking advantage of them. Finally, the identified threats should be utilized in a manner which allows the organization to confront and overcome them (whenever possible) or, at the very least, lessen the negative impact they will have on the organization.

STEP SEVEN: DEVELOP SPECIFIC STRATEGIC GOALS AND STRATEGIC OBJECTIVES

Goals are general statements related to the "what should be" vision. An example is "to improve the world's environment."

Strategic objectives, on the other hand, are specific statements of results which are measurable. An example is "by the year 2,000, to enact programs which will cause a zero drop-out rate in Troubled High School."

STEP EIGHT: DEVELOP AND OPERATE ACTION PLANS

Action plans spell out the detailed tactics to be utilized to achieve the specific strategic objectives stipulated. They include identification of: (1) each task to be completed, and the chronological order in which they are to be achieved, (2) the person responsible for achievement, (3) the time line permitted, (4) the resources necessary, and (5) the methods of measuring and evaluating whether it has been achieved and the qualitative and quantitative levels agreed upon.

STEP NINE: MONITOR AND EVALUATE

Monitoring of beliefs, CSFs, scanning data and the attainment of objectives must be continuous, and in-process modifications must be made when there is an identified cause for modification.

Based on this monitoring process, evaluations are made of the strategic plans and of the tactics which are used during the action stage. When the evaluation is done during the operation of the strategic plan, it is termed formative evaluation, and when it is conducted at the end of a pre-specified period or activity, it is called a summative evaluation.

Now that the steps of a comprehensive strategic plan have been identified, let's investigate why some educational organizations fail in their attempts to conduct strategic planning.

Why Some Educational Organizations Fail

It is very seldom that a single causative factor can be identified as the reason why a specific school district, university or other educational organization fails in its attempt to do strategic planning. However, it seems quite clear that the following list identifies those factors which lessen the chance of an educational organization being successful in its attempt at strategic planning.

- Leaders of organizations many times want a "quick fix," and strategic planning is a commitment to strategic thinking and long-term planning to achieve a vision of "what should be" or "what could be."
- Failure of the CEO (president or superintendent) to strongly support the planning activities and to be a visible participant in them.
- Failure of the governing board to give strong official sanction to the strategic planning activities and to support them with the public and the media.
- Reluctance to allocate sufficient human, financial and material resources to accomplish the strategic plan once it is planned.
- Inability or lack of desire to involve all categories of "stakeholders" in the strategic

planning process. A leader can only lead if she/he has followers. Stakeholders are those individuals and groups which have an interest and investment in the results achieved by the organization. Stakeholders can include administrators and governing boards, but they also include community members, community organizations, businesses and industries, students, parents, and other important persons.

At the least, stakeholders should be involved in developing a consensus vision and mission for the organization. They also can be involved in scanning activities, identification of the Critical Success Factors and strategic goals. I believe, however, that once these steps are completed, the administration, employees and consultants (if any are required) should develop the strategic objectives, devise and operate the action plans and perform the monitoring and evaluation functions.

- Planning takes place "before" a vision and mission have been developed. This is the old "cart before the horse" syndrome.
- Some administrators and planners are not capable of, or do not wish to, specify clear and measurable strategic objectives for which they can be held accountable.
- Some planners forget to conduct scanning activities which identify trends to be dealt with during the development of the organization's strategic plan.
- Some organizations do not conduct a needs analysis which identifies the gaps between "what should be" or "what could be" and "what is."
- Organizational planners do not know how, forget to conduct, or don't want to take the time to do a SWOT (strengths, weaknesses, opportunity and threats) Analysis of their external and internal environment.
- Planners sometimes do not develop sufficiently detailed action plans, and they do not clearly identify the sub-tasks to be performed, the individual or group to perform the sub-tasks, the time sequence allowed for completion, the resources necessary, or the clearly stipulated measurements to be utilized in evaluating the qualitative and quantitative aspects of each tactic and task.
- The organization's CEO or board of directors implement strategic planning by mandate without anticipating the training needs of those who will do the planning or the needs of those who are to operate the plans once they are developed.
- Most importantly, those involved in strategic planning and operational activities are not clear-cut, identifiable-results oriented nor are they strategic thinkers.

Concluding Thoughts

If you don't have a clear vision of what you want your school district, university or educational organization to look like five, ten, or more years in the future, consider this your initial priority. If you have a clear vision, I suggest that involving yourself and the appropriate stakeholders in strategic thinking and strategic planning will pay dividends.

If I want to buy a beautiful home ten years from now, I had better devise a plan to achieve that desired result. If I wish to get to Tuscaloosa, I had better plan the most direct and cost effective route. If I want to reach my vision of the future, I had better think and plan strategically for there is no other rational way to go.

References

Herman, J. (1988). Map the trip to your district's future. *The School Administrator*, pp. 16,18, 23.

Herman, J. (1989). School business official's roles in the strategic planning—part two. *School Business Affairs*, pp. 20, 22-24.

Herman, J. (1989) School district strategic planning-part one. *School Business Affairs*, pp. 10-14.

Kaufman, R. and Herman, J. *Strategic planning* (in process). Charles C. Thomas Publisher.

European Forum on Educational Administration

In order to mutually expand opportunities for experience and to broaden our professional perspectives, dialogue and direct communication with the European Forum on Educational Administration (Forum) is being established. This will enable ISEP members to directly contact the members of the Forum for the purpose of organizing professional visits and to exchange ideas and experiences in educational management.

The European Forum on Educational Administration is an organization for the development and exchange of ideas and for the stimulation and promotion of contacts and exchanges of information between members. It links national organizations and individuals in the field of educational administration and management from most European countries and provides a forum for researchers, trainers, inspectors, administrators and practitioners at institutional, local, regional and national levels, from schools, technical, adult and higher education.

Members of ISEP who wish to contact Forum members, or seek more information about Forum, should write to:

Professor Leonard E. Watson
Centre for Educational Management and Administration
Sheffield City Polytechnic
36 Collegiate Crescent
Sheffield S10 2BP
England

(Fax: 44-742-532-4701)

At the annual meeting of the International Society for Educational Planning, the Membership approved the selection of Virginia Beach, Virginia as the location of the Annual Conference for 1992.

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INVITATION TO SUBMIT MANUSCRIPTS

The editors of *Educational Planning*, a refereed journal of educational planning issues, invite the submission of original manuscripts for publication consideration. *Educational Planning* is the official journal of the International Society for Educational Planning.

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NOTES

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PURPOSE	The International Society for Educational Planning was established to foster the professional knowledge and interests of educational planners. Through conferences and publications the Society promotes the interchange of ideas within the planning community. The membership includes persons from the ranks of governmental agencies, school-based practitioners, and higher education.
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Memphis State University,
Bldg. 48 - South Campus
Memphis, TN 38152