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ABSTRACT

The present study focused on possible linkages between (1) the global characteristics of Kansas with individual characteristics, voting behavior, and attitudes of the Kansas state senators; (2) the personal and attitudinal characteristics of senators with various educational policy outcomes; and (3) the structural features of the senatorial district and constituency with the senators' attitudes and voting behavior. Data collected for all 40 Kansas state senators were subjected to stepwise regression analyses. The study revealed that, in efforts to develop an adequate theory of legislator decision-making behaviors, variables that relate to the legislator's district and constituency offer the greatest explanatory and predictive potential. (Author)

LEGISLATOR CHARACTERISTICS, ATTITUDES, AND CONSTITUENCIES AS PREDICTORS OF EDUCATIONAL POLICY LEGISLATION

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ABSTRACT

The present study focused on possible linkages between (1) the global characteristics of Kansas with individual characteristics, voting behavior and attitudes of the Kansas State Senators, (1) the personal and attitudinal characteristics of senators with the various educational-policy outcomes, and (3) the structural features of the senatorial district and constituency with the senators' attitudes and voting behavior. Data collected for all 40 Kansas State Senators were subjected to step-wise regression analyses. The study revealed that, in efforts to develop an adequate theory of legislator decision-making behaviors, variables which relate to the legislator's district and constituency offer the greatest explanatory and predictive potential.

LEGISLATOR CHARACTERISTICS, ATTITUDES, AND CONSTITUENCIES AS PREDICTORS OF EDUCATIONAL POLICY LEGISLATION

The establishment of education is seen as the product of legislative bodies, judicial bodies, and administrative agencies, all elected or appointed by elected officials. Most state constitutions make education expressly a duty of the states, and all legislatures have enacted statutory authority for appropriations to administrative agencies to provide for the education of the children and the youth of the state. Written contracts for the establishment of government are uniquely American. When the Colonies declared their independence from tyranny, taxation without representation, and the rule of arbitrary royal governors, they could rely on charters of settlement, court decisions of common law, and some basic human ideals for establishing their new governments. With this background, it is understandable that the drafters of the Constitution would entrust great power to representative legislatures. By doing this, they placed education in the political arena.

Education is mentioned in every state constitution in varying detail. Collins, (1969), in his review of constitutions to find explicit authority for education, found evidence that constitutions in 45 states provide for the establishment of common schools, and 35 states expressly establish methods for the financial support of schools. More than 30 states express manners of choosing or removing chief state-school officers and their duties. Thirty states explicitly prohibit the use

of public funds or tax revenues generally for the support of religious institutions, and others prohibit specified funds. About half of the states constitutionally prohibit their legislatures from enacting specific laws regarding the management of school districts. In another fourth of the states, statutes prevent special legislation on local matters. In about three fourths of the states, authority for home rule or optional laws to establish and adopt a federated system of government prevent state intervention in local government by specific enactments for a particular community. At the other extreme, Massachusetts allows special state legislative acts to dissolve or establish specific school districts. Before universal suffrage for women, educational issues provided in five states the first opportunity for women to vote.

About one fourth of the state constitutions indicate that school districts are created by the legislature and are under its control. Three fourths of the state constitutions expressly enumerate subjects for instructional programs in schools. State constitutions and laws usually provide for the important state administrative functions of education through (1) a state board of education, (2) a chief state-school officer, and (3) a department of supporting staff members. The legal establishment of education makes it a matter subject to the political processes at various governmental levels involving partisan, bipartisan, and nonpartisan politics.

In a democracy such as that of the United States, the system of education should be quickly recognized and treated as a matter of public politics. Along with the public faith in education that has developed in this

country, the philosophy that schools and educators should be completely separated from politics has also existed since colonial times. The prevailing philosophy has been that schools should be divorced from politics and that educators should take no part in political decisions other than to vote.

The notion that evolved in this country that politics and education should not have anything to do with each other is a myth based on a misunderstanding of politics, of the role of education in a democracy, and of the way in which that role is determined. As suggested by Bailey, (1962), schools are definitely political entities.

> There is irony in the fact that school systems and school problems have rarely been studied as political phenomena. More public money is spent for education than any other single function of state and local government. No public school in America exists without state legislative sanction. All over the United States school boards are elected or appointed through a highly political process--often most supremely political when called "non-political." Educational planks are increasingly found in partisan platforms at all levels of American politics. The size, location, cost, books, and facilities of school buildings are frequently matters of high political controversy. The size, scope, and influence of state departments of education are inevitably conditioned by political forces. The difference between salary schedules for teachers and school administrators in California on the one hand and New Hampshire on the other cannot be effectively explained by reference to state economic indexes alone.
>
> In short, education is one of the most thoroughly political enterprises in American life--or for that matter in the life of any society. (pp. vii-viii)

The relationship between education and politics exists at every level of government: local, state, and federal. But the relationship at the state level is of special interest to educational adminis-

trators. The state legislature can be quickly identified as a central arena of conflict among educational interests. As previously mentioned, all state constitutions place the responsibility for public schools on the state. It logically follows that the legislature has considerable power to determine the scope and the organization of the public schools and that educators increasingly have responsibilities for becoming politically knowledgeable and active in the politics of education and its manifestation in the state legislature.

Easton (1965a) believes that the basic units of political systems are not persons, parties, legislatures, or any structures or institutions. Instead, they are the set of relevant interactions that exist among the members of the system. These interactions, then, are the basic unit of analysis of existing political systems. These political interactions are predominately oriented toward the authoritative allocation of values for a society. This allocation distributes valued things among persons or groups and becomes authoritative when the persons consider that they are bound by the decision. As a total view, Easton sees the political system as being a set of interactions, abstracted from the totality of social behavior, through which values are authoritatively allocated for society. The political system is then a vast conversion process within which the inputs of demands and system support are typically processed, and the outputs that are produced enable the system to persist in its most fundamental form, that of allocating values.

Problem

The present study is not concerned with what policies governments ought to pursue but rather with why governments pursue the policies they do. The researchers have investigated linkages among (1) the global characteristics of Kansas with individual characteristics, voting behavior and attitudes of the Kansas State Senators, (2) the characteristics of senators, personal and attitudinal, with the various educational-policy outcomes, and (3) the structural features of the senatorial district and constituency with the senators' attitudes and voting behavior.

The study approaches educational policymaking by examining the complex interplay among: environmental forces; the characteristics of political systems; the personal characteristics, attitudes, and behaviors of the policymakers; the activities of interest groups; and the educational-policy outcomes of a legislative body. The problem emerges from two sources. First, no theory yet exists that adequately explains why state resources are allocated for education as they are. Second, many explanations posited to date with regard to educational allocations virtually deny the possibility of political intervention or deliberately subordinate the importance of political factors. The researchers sought to add to the foundations of an adequate theory and to determine the extent to which political variables are useful in explaining educational-policy decisions.

Purpose

The purpose of the study was to examine educational policymaking in the Kansas Senate, the way Kansas Senators approach planning,

budgeting, financing, and controlling education. This examination is a partial replication of the work done by Zeigler and Johnson (1972) in Oregon. The Oregon study encompassed both houses of the legislature whereas this replication deviates from that study by examining only the Kansas Senate, chosen in an attempt to have a manageable sample and to compare the findings in one house of the legislature with those from the entire collective in Oregon. While not attempting to propose a theory of educational policymaking, the researchers have sought to establish some relationship conducive to theory building. Rigorous theory building can take place only in the presence of comprehensive data. More states would need to be studied in much greater detail before one could even begin to approximate a general theory of state educational policymaking.

Conceptual Framework

Zeigler and Johnson (1972) in their efforts to explain the allocation of educational resources constructed a model based on Easton's (1965b) input-output model as depicted in Figure 1. This model suggests that one must explore the "inputs" of a state legislative system in terms of state, federal, and local characteristics in order to discover why any given educational outcome results. These ecological and political variables constitute the substratum within which a legislator must operate in setting policy.

Conceptually, the input-output model, more commonly known as the general systems model, conceives resources as inputs (supports and demands, Linkage A) that are converted, through the medium of within-

INPUTS ——————————————— OUTPUTS

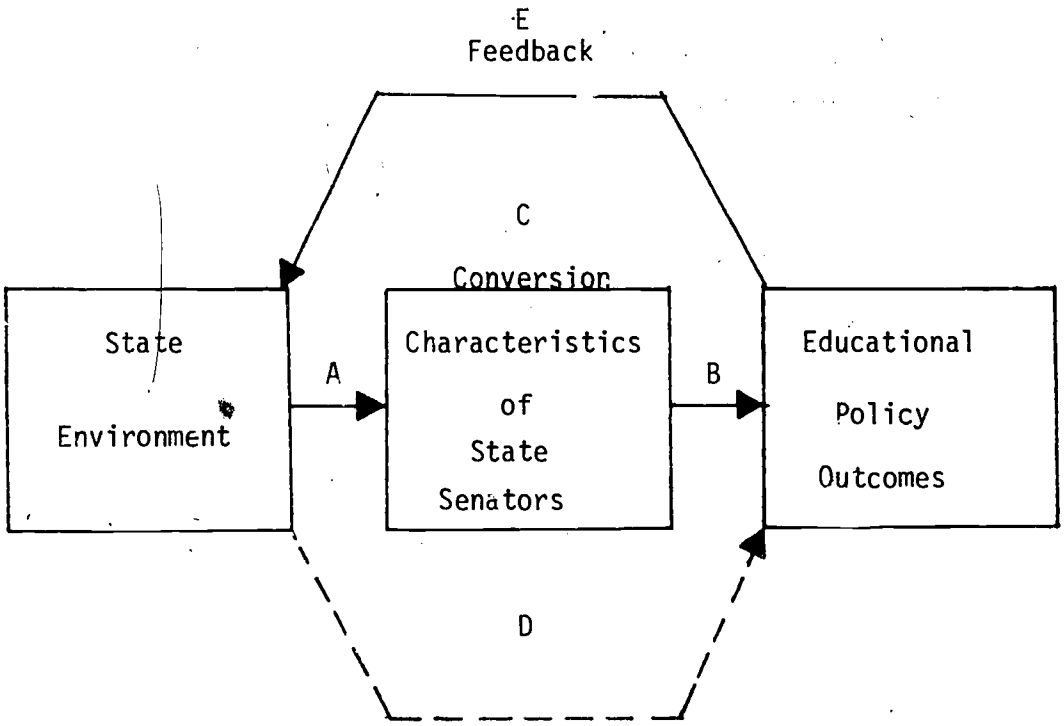

Figure 1

General Systems Model

puts (legislative institutions and procedures, Linkage C), into outputs (legislation, Linkage B) for the political system and the environment. The policy outcomes have for the citizenry consequences that produce new considerations that may be regarded as feedbacks (Linkage E). According to this conception, the legislator's role consists of converting the demands of his constituency, political party, friends, family, and various interest groups into a series of policies that are then considered as new objects of contention within the political community.

Dye (1966) has used the input-output model to study policy outcomes of the American states. He has generally focused on the relationships between industrialization, urbanization, wealth, and education on the one hand and political integration, political development, and public policy outcomes on the other. The within-puts are to a large extent neglected. Dye, as an economic determinist, asserts that there is a direct association (represented as Linkage D in Figure 1) between the inputs and the outputs of the model. If policy outcomes are products of economic development, the views of the legislators become unimportant. This concept was viewed as inaccurate by Zeigler and Johnson (1972) because the question of how the legislator enters into the policymaking process still seems to be unanswered. In an effort to concentrate on the legislators' role in the process, the systems model was considered to be inadequate by Zeigler and Johnson. They chose to use a conceptual framework of overlapping spheres based on the legislative model as presented in Figure 2.

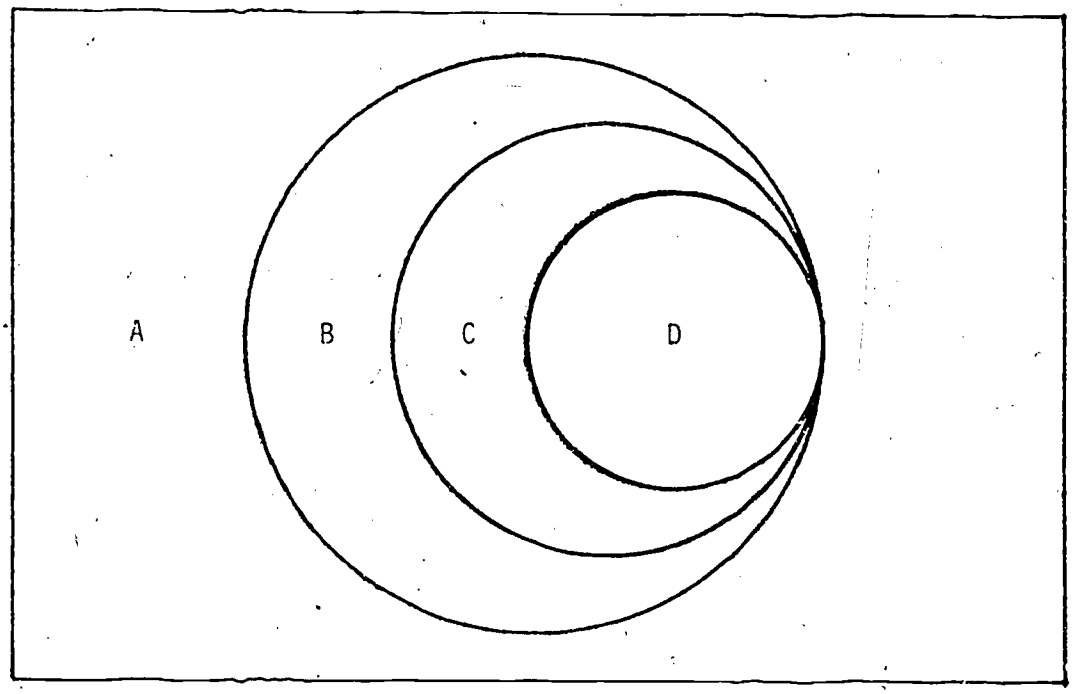

Figure 2

Legislative Model of Overlapping Spheres

This study is built around that same conceptualization, that educational policymaking can be explained by use of the legislative model. The legislative model may be likened to a series of spheres in which the inputs from any sphere actually originate in the larger spheres of which they are a part.

The universal set, or the rectangular area of A, depicts the environment. Sphere B reflects the political system, Sphere C the state senate, and Sphere D the individual senator. Environment A includes all of the activities within B, C, and D. Sphere B is the model that includes the activities within C and D. The outcomes of B, C, and D are included in Environment A. The state senate, Sphere C, reflects the general character of the political System B and the sociopolitical Environment A. In turn, general system variables (included in Sphere B) become specific system variables for Sphere C and result in new outcomes for the environment. The interaction patterns and the relational activity in Sphere C are studied at one level, later called structural. Individual demographic characteristics and attitudes are considered to be at another level of analysis within Sphere C. Sphere D represents the individual state senator as the unique unit studied in this model. His characteristics, both demographic and attitudinal, can be determined empirically without reference to other individuals, yet Sphere D reflects effects from Sphere B and C and Environment A, and these spheres also contribute to the definition and the interactions of the legislator in relation to other elements. For instance, party membership is a characteristic of the individual senator. Partisanship affects interactions with peers, interest groups, and voters. In the larger national political

systems, competition provides a summary characteristic of the state in decisions of Congress to allocate funds, etc. Therefore, even though legislators are studied as a unit, the larger political, socioeconomic environment is considered an integral part, influencing the decisions senators make in distributing available resources.

The possibility of linking the spheres is enhanced by data on the variables and the techniques. Voting records, as reflections of the overlap of the spheres, can be obtained. Measures of attitudes, as individual propensities toward expenditures and taxation for education, are available or at least obtainable. The operationalization of the state legislative model is possible in light of the variables.

Competition, partisanship, and urban-district character have been found to affect attitudes and behavior in relation to interest groups and public policy. Dye (1966), although considered an economic determinist because of his concentration on the economic inputs in explaining policy outcomes, pointed out in his study on education policy outcomes that significant associations

> . . exist between partisanship [sic] and elementary teacher preparation, pupil-teacher ratios, dropout rates, mental failures, the size of school districts and the extent of state and federal participation in school financing. The coefficients for these relationships are noticeably reduced when economic development is controlled, but we cannot reject the idea that there is some linkage between partianship [sic] and these outcomes, a linkage which is not an artifact or economic development. (p.6)

This atatement merely reiterates the contention that outcomes must be considered in light of interactions in the state senate. The data allow a discussion of the perceptions that senators have about the power of educational lobbyists and issue processes. These attitudes are, in general, dependent variables used in this analysis. Moreover, these attitudes can be scaled or used to build indices that may be related to the state senate variables. Specific questions posed to senators can extract data that reflect their attitudes on educational matters, educational lobbyists, and the legislative process. Likewise, it is possible to obtain reliable data on the more conventional demographic variables, for example, income, party, age, education, and occupation.

These variable linkages and the processes that surround the merging of the spheres are viewed as a funnel of causality. This funnel provides a simple paradigm for the legislative model, which moves from a broad environment to the interaction of the legislative context, from the legislative context through the attitudinal configurations of the legislators, and from the attitudes of lawmakers to their votes on education bills.

Variable Framework

The framework for variables is suggested by Lazarsfeld and Menzel (1961), who suggest three categories of information that can be employed to describe the behavior of legislative members: (1) analytical properties based on data about each individual member,

(2) structural properties based on data about the relations among members, and (3) global properties based on data other than that pertaining to information about the properties of individual members or the relations among members.

To examine various members within any aggregate or structure, one must consider individual variables, characterized by Lazarsfeld and Menzel as being absolute, relational, and contextual.

> Absolute properties are characteristics of members which are obtained without making any use either of information about the characteristics of the collective, or of information about the relationships of the member being described to other members. They thus include most of the characteristics used to describe individuals. (p. 431)

In the present study absolute variables are income, current occupation, education, age, and attitudes. Lazarsfeld and Menzel (1961, p. 431) say, "Related properties of members are computed from information about the substantive relationships between the member described and other members."

The attitudinal measurements of a state senator have relevance only in relation to (1) other attitudinal types and (2) the beliefs that form the underlying dimensions of the measurement. With respect to indices, no one legislator can be said to have more or less feeling toward an object or a situation than others. Nevertheless, when attitudinal scales or indices of demographic or structural variables are used to explain specific attitudes, a legitimate linkage between structural, relational, and absolute variables can occur.

Classification of variable properties is made according to the theories and the judgments of researchers, not to an empirical reality. Classification is necessary to clear up the problem created by the various data levels contained in the legislative model, including the level of measurement in Dye's (1966) analysis and also the levels of measurement in the Wahlke, Eulau, Buchanan and Ferguson study (1962). The personal characteristics of the actors within the senate structure are included and are represented in the legislative model. Indeed, representation of the aggregate, the structural, and the analytical levels of variables is necessary to have testable hypotheses. Within the analytical framework, the individual member data are classified as absolute or relational.

Zeigler and Johnson (1972) proposed that a system of explanation taking into account analytical, structural, and global properties is a feasible approach to a marriage of two research traditions, the analytic and structural emphasis of Wahlke, et al. (1962) and the global concentration of Dye (1966). These two approaches are not, in the Lazarfeld and Menzel (1961) scheme, contrasting but rather complementary approaches to research.

To set the context in which the legislature operates, Zeigler and Johnson selected variables from the studies of Dye and Wahlke, et al. linking aggregate data to policy outcomes. Aggregate data, which transcend individual data, thus fall under the rubric of global data, which reflect the environment in which a state legislature is located and provide aggregate feedbacks that affect the

senators and are contextual variables for particular state senates. These are global variables for the senate but are contextual variables for the individual senate members. In the present study an attempt is made to link levels of variables. Specific variables that were considered and for which data were collected are listed in Table 1.

Hypotheses

The following hypotheses were developed from the literature base to study the relationships between political variables and attitudes and educational-policy outcomes.

H_1: No significant predictive relationship exists between a linear composite of aggregate, structural, and demographic variables and Kansas senators'

1.1 Educational-issues attitude

1.2 Educational-lobbyist attitude

1.3 Legislative-process attitude

H_2: No significant predictive relationship exists between a linear composite of aggregate, structural, demographic, and attitudinal variables and Kansas Senators' roll-call votes (factor scores) on educational legislation.

Table 1

Legislative Model Variables

Aggregate Variables: Global and Contextual Items (Data from published sources)

1. Kansas' progressive-liberalism score*
2. Kansas' federalism-and-concern score*
3. Percentage of urban population in senatorial district
4. Total urban population in district
5. Percentage of population in largest city
6. Population of largest city
7. Index of incompatibility (district/legislator party orientation)

Structural Variables (Data from official state records)

1. Leadership position (Senate officer or committee chairperson)
2. Republican percentage of vote in 1972 gubernatorial election
3. Democratic percentage of vote in 1972 gubernatorial election
4. Number of opponents in primary
5. Number of votes cast for Senator in primary
6. Senator's percentage of votes in primary
7. Number of votes cast for Senator in general election
8. Senator's percentage of votes in general election
9. Republican percentage of votes in 1972 Congressional election
10. Democratic percentage of votes in 1972 Congressional election
11. Number of years in the Senate
12. Party affiliation

Demographic Variables (Data from personal interview with Senators)

1. Age of Senator
2. Level of educational achievement of Senator
3. Occupation of Senator, scaled to relative Socioeconomic Status**
4. Income of Senator

Attitudinal Variables (Data from personal interview with Senators)

1. Educational issues
2. Educational lobbyists
3. Legislative process

* The progressive liberalism and federalism-concern variables, while important aggregate variables in across-state studies, were not actually included in the present study. The reason for the omission is that these are variables for which data are available only on a state level, not for the individual state senators which represents the unit of analysis in the present study. (See Zeigler and Johnson, 1972).

** Scaling done following methodology of Zeigler and Johnson (1972).

Population and Data Collection

Data for this study pertaining to the 40 Kansas Senators serving in the 1974 Kansas Legislature were collected from the following sources and processes: (a) Aggregate and structural variable data were ascertained from secondary sources. (b) Data pertaining to demographic and attitudinal variables were collected by interviewing Kansas senators. (c) Voting patterns were established through roll-call analysis (Anderson, et al., 1965) on nonunanimous elementary and secondary educational bills that encountered at least 10 percent opposition in the Kansas Senate during its 1974 session.

As previously discussed, the legislative model includes aggregate, structural, and personal variables. Aggregate variables do not relate to individual or particular senators but rather fall under the realm of global data, which provide inputs that affect the individual senators. The structural variables are associated with the political characteristics of the legislator's district and constituency. These aggregate and structural variables were identified by reviewing primarily six sources: (a) the 1972 study by Zeigler and Johnson, (b) Kansas Election Statistics, 1972, (c) Kansas Directory, 1973, (d) Kansas Statistical Abstract, 1973, (e) Journal of the Senate, 1974, and (f) 1973-1974 Kansas Legislative Directory. Attitudinal and demographic variables were ascertained by interviewing the 40 Kansas State Senators. Voting records on 1974 educational bills were collected from the 1974 Journal of the Senate.

Instrumentation

The interview schedule utilized for data collection consisted of two parts, questions designed to measure the attitudes of the senators and questions designed to collect demographic data about each senator. The attitudinal questions were those used by Zeigler and Johnson (1972) and fall into three catagories, (a) educational issues, (b) educational lobbyists, and (c) legislative process. Each senator was asked for such demographic data as age, educational background, income by range, and occupation.

Zeigler and Johnson considered each category as a separate attitudinal index, which they labeled the Educational-issues Index, the Educational-lobbyist Index, and the Legislative-process Scale. The Educational-issues Index has a coefficient of reproducibility of .83 and reflects legislators' attitudes toward the size of education budgets and the tax support for education. The Educational-lobbyist Index, with a coefficient of reproducibility of .77, is the weakest of the three attitudinal indices. This index reflects legislators' attitudes toward educational lobbyists. The last scale is concerned with lobbyists in general and the legislative process while the other two indices focus specifically on education. The coefficient of reproducibility for the Legislative-process Scale is .88.

Zeigler and Johnson followed the advice of Golembiewski (1969) in measuring attitudes and used Guttman scale logic for the three attitudinal indices. Guttman scale logic assumes the score reflects

the number of consecutive positive responses from point start and until a negative response is given. Subsequent answers are not reflected in the score. Zeigler and Johnson found significant correlation between Guttman scale scores and Cornell scores (total positive responses) on the attitudinal indices; therefore, Guttman scale scores were treated as interval data in the regression analysis phase of the present study.

Data Analysis

If one assumes that the political variables mentioned in the previous sections are important in transforming environmental inputs into educational-policy outcomes, then knowing specifically which variables are related to senators' voting patterns and attitudes toward education is important. Even though this process was conceptualized in terms of spheres, the analysis of voting and attitude formation followed a step-by-step process that can be depicted in linear terms (Figure 3).

In the legislative model the variables farthest from the senators' votes are the aggregate characteristics, the global and contextual variables, of the state. Next in line are the political characteristics, the structural variables, of the senators' districts or constituencies. Next are the personal characteristics, labeled as demographic variables, of the senators. Lastly, nearest to the actual vote are the senators' attitudes expressed in the Educational-issues Index, the Educational-lobbyist Index, and the Legislative-process Scale.

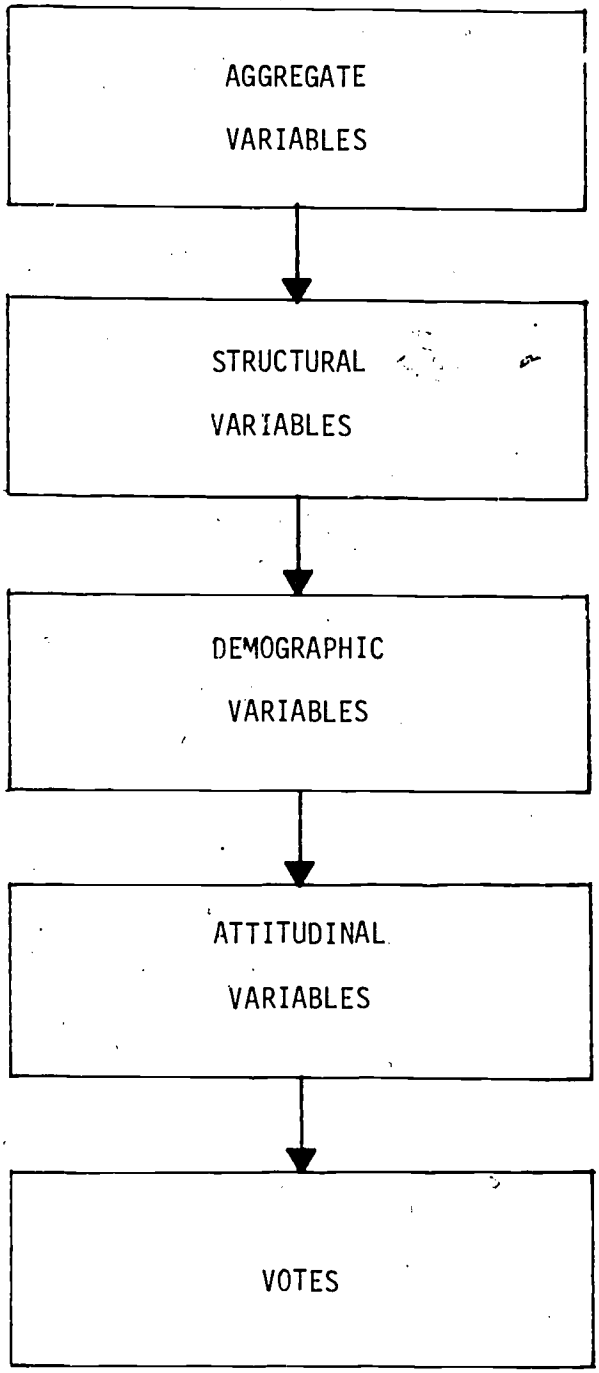

Figure 3

Linear Legislative Model

To facilitate a mathematical analysis of the data, as conceptualized in the sphere model, the linear model as proposed by Zeigler and Johnson (1972) was used. The techniques for analyzing the data are more suitable for linear than for sphere models. When a sphere model is used, the flowing and the overlap between levels can be studied, but the actual analysis is designed in a step-by-step progression. A sphere model can be expected to emerge in the actual analysis. This means that in stepwise regression some ecological variables may explain most of the variance in a dependent variable and appear first in the regression equation.

Dye (1966) contends that, after an explanatory model is constructed, a research design must be implemented to make the model operational. He further contends a model need not have empirical referents unless one is concerned with the external validity of that model. Johnson (1970) took two further steps in his concern for external validity by (1) deducing hypotheses about the relationships among the model components and (2) determining what observable factors are assumed to represent the concepts of the model.

The examination of the environment and its relationship to educational outcomes was analyzed in two steps. The analysis of roll-call votes was conducted by factor analyzing voting patterns. Factor analysis provides a means of describing roll-call votes and the voting behavior of individual senators and groups of senators. The method determines, for a given number of roll calls, if a smaller number of underlying dimensions exist, which will facilitate efforts to explain the variance in the roll calls (Anderson, et al., 1966).

Roll calls were taken on 81 educational bills during the 1974 session of the Kansas Senate (Journal of the Senate, 1974). Of the 81 bills, 21 met the criteria of being nonunanimous elementary and secondary educational bills that encountered at least 10 percent opposition. The 21 bills reduced to three major factors that included 14 of the bills and accounted for 51 percent of the total variance among the bills. The three factors identified were: Factor I, Legislative Delegation of Power and Responsibility; Factor II, Program Development and Enhancement; and Factor III, Administrative Procedure, Establishment and Review. To establish the reliability of the identified factors, Cronbach's (1951) Alph Coefficient was computed for each factor separately and all factors combined. The coefficient for Factor I was .82, Factor II was .80, and Factor III was .54, with an overall coefficient of .70.

Employing stepwise multiple regression techniques (Kerlinger and Pedhazur, 1973), the voting behavior measures for individual senators (roll-call analysis factor scores) within each dimension were related to the global, structural, and analytical variables. Data collected were used specifically to investigate linkages among aggregate, structural, and demographic indicators in an effort to explain the variance in senators' attitudes and voting behavior related to education. The researchers recognize problems associated with applying regression statistics to data collected from only 40 state senators. While this number does represent a total population rather than a sample of a population, the researchers do advise others to view results of the data analyses with some degree of caution. Nevertheless, the results of the present study, although not widely generalizable, do appear to provide some additional bases for further refined attempts to develop a viable conceptualization of educational policy making within state legislative bodies.

Results

Regression analysis for the first hypothesis treated the senators' three attitude scores as dependent variables and the composite of aggregate, structural, and demographic data indices as independent variables. The same independent variables, plus the three attitude measures for the senators, were treated as the composite of independent variables when roll-call voting behavior was the regression variable. The dependent variables in the roll-call voting behavior regression analyses were the three factor scores for the state senators.

Attitudes

Results obtained in the regression analysis suggest partial rejection of the state hypothesis that there exists no relationship between a composite of aggregate, structural, and demographic variables and the criterion variable of Kansas senators' attitudes. The F ratio for the regression equation, when the criterion variable was senators' Educational-issues attitudes, was such ($F = 2.851$, $df = 7,32$; $P<.05$) that the null hypothesis is rejected in regard to this particular domain. Seven variables met the one percent selection criterion for inclusion in the regression equation (see Draper and Smith, 1966) and, in combination, accounted for 38.4 percent of the Educational-issues attitude variance. The variables and their classification within the legislative model typology were as follows: (a) aggregate variables--percentage of the senatorial district population residing in the district's largest city; (b) structural variables--number of opponents and number of votes received in the senator's primary election, number of votes and percentage of favorable votes received by the senator in the general election, number of terms served in the senate, and percentage of Democratic

votes in the last Congressional Election; and (c) demographic variables--none appearing in the regression equation. However, it must be noted that only the two general election variables and the largest city population variable had significant beta weights.

The F ratios for the regression analyses of senators' Educational-lobbyists attitudes ($F = 1.866$; $df = 12,27$, $p>.05$) and senators' Legislative-process attitudes ($F = 1.946$, $df = 8,31$; $p>.05$) were not significant. Therefore, the hypothesized null explanatory/predictive relationships between the legislative model linear variable structure and these two criterion variables are retained. While the regression equations themselves did not reach statistical significance in these two cases, the variables appearing in the equations are presented later in the discussion section (see Table 2) as guides to further investigation.

Voting Behavior

The hypothesis that there exists no significant predictive relationship between a linear composite of aggregate, structural, demographic, and attitudinal variables and the criterion variable of senators' roll-call voting behavior on education legislation must be rejected. However, the alternative affirmative hypothesis must be accepted cautiously, given that different results were attained in the present study for the three separate roll-call factors as regression analysis criterion variables.

Regression analysis for Legislative Delegation of Power and Responsibility (Roll-Call Factor I) did not result in a significant F ratio ($F = 1.354$, $df = 8,31$: $p>.05$). Eight variables did serve to explain 25.9 percent of the voting variance; however, none of the eight had significant beta weights. These variables are identified later in Table 2.

When Program Development and Enhancement (Roll-Call Factor II) was considered as the criterion variable for regression analysis, a significant F ratio was attained ($F = 4.022$, $df = 10,29$ $p < .05$). The ten variables and their legislative model classification, which combined to explain 58.1 percent of the voting behavior variance for Factor II, were as follows: (a) aggregate variables--the senator's index of incompatibility with his constituents' party membership; (b) structural variables--senator's party affiliation, Democratic and Republican percentages of votes cast in the last Congressional election, number of votes received by the senator in the general election, and number of terns served in the state senate; (c) (c) demographic variables--the senator's level of education attainment, income, and occupation; and (d) attitudinal variables--the senator's score on the Education Issues attitudinal index. Of these variables, only five had significant beta weights within the regression equation; these being, party affiliation, level of education, occupation, number of terms in the senate, and number of votes received in the general election.

Regression analysis with Administrative Procedure, Establishment, and Review (Roll-Call Factor III) as the criterion variable resulted in a F ratio significant at the .05 level ($F = 8.763$, $df = 9,30$). The nine variables in the regression equation combined to explain 72.4 percent of the voting behavior variance for Factor III legislation. These variables and their classification within the variable typology were as follows: (a) aggregate variables--percentage of the senatorial district residing in urban areas, percentage of the senatorial district residing in the district's largest city, and the senator's index of incompatibility; (b) structural

variables--senator's party affiliation, senator's leadership position within the state senate, number of terms served in the senate and the Democratic percentage of votes cast in the last Congressional election in the senatorial district; (c) demographic variables--senator's income level; and (d) attitudinal variables--the senator's score on the Educational-lobbyist attitudinal index. Only two of the nine predictor variables, income and leadership position, lacked beta weight significance.

Discussion

The conceptual framework of this study was based on the legislative (sphere) model with one purpose being to add to further theory development. In Table 2 the variables and their predictive power have been summarized in an effort to observe and discuss the applicability of the legislative model as proposed by Zeigler and Johnson (1972). If political variables are important in transforming environmental inputs into educational policy outcomes, then it is necessary to know specifically which variables determine legislative voting patterns and attitudes toward education. Farthest from the individual senator and his voting behavior in the model are the aggregate characteristics of the state. Next in importance are the political characteristics of the senator's district or constituency, the structural variables. Lastly, closest to the actual vote, focus is placed on the senator's personal characteristics, age, education, income and occupation and his attitudes. If the sphere model is to retain its validity in explanation of attitudes and voting behavior, one would expect to find the demographic and attitudinal variables as dominant in the regression equations with the political system variables and the environment variables of lesser importance.

In reviewing Table 2, one notices that the political system variables that describe the senator's district and constituency were more viable in the explanation of outcomes than the demographic or attitudinal variables. Although Zeigler and Johnson (1972) rejected the general systems model (Easton, 1965b) the findings of this study seem to substantiate the systems model more so than the legislative model. Evidence in this study seems to indicate that the senator is inclined to vote on the basis of certain factors which are readily associated with his identifiable constituency.

Kansas-Oregon Study Contrasts

The summary and concluding statements of this study would be incomplete if the results were not compared with those of the Zeigler and Johnson (1972) study. In the Oregon study there was not a significant predictive relationship between predictor variables and Educational-issues attitudes whereas the present study shows a significant predictive relationship. In reviewing the specific predictor variables, it is noteworthy that the Oregon study and this study have similar types of predictor variables. In Oregon five of the seven predictor variables are structural, and in Kansas six of seven are structural. It seems that, if legislators' Educational-issues attitude can be predicted, the predictors would be of the structural type (voting and voter characteristics) variables.

In the area of predicting Educational-lobbyist attitudes, the Oregon study produced a significant regression equation whereas the Kansas study did not. Structural variables were predominant in both regression analyses. Three of the variables are identical in the prediction of Educational-lobbyist attitude.

Table 2

Summary of Variable Importance in Predicting Senator Attitudes and Roll-Call Voting Behavior

Predictor Variables by Category	Criterion Variables: Attitudes: Educational Issues	Attitudes: Educational Lobbyists	Attitudes: Legislative Processes	Roll-Call Votes: Factor I	Roll-Call Votes: Factor II	Roll-Call Votes: Factor III
Aggregate						
Progressive-liberalism	-	-	-	-	-	-
Federalism-concern	-	-	-	-	-	-
Percentage urban population						X*
Total urban population		X				
Percentage in largest city	X*	X*				X*
Population of largest city			X			
Index of incompatibility		X	X	X	X	X*
Structural						
Leadership position		X				X
Gubernatorial election:						
Percentage vote, Democrat						
Percentage vote, Republican						
Senate primary election:						
Number of opponents	X	X*		X		
Percentage of votes		X				
Number of votes	X	X		X		
Senate general election:						
Number of votes	X*	X*		X	X*	
Percentage of votes	X*	X*	X	X		
Congressional election:						
Percentage vote, Democrat	X				X	X*
Percentage vote, Republican		X*	X		X	
Number of terms in Senate	X	X	X		X*	X*
Party affiliation				X	X*	X*

Table 2 (continued)

Predictor Variables by Category	Criterion Variables: Attitudes: Educational Issues	Attitudes: Educational Lobbyists	Attitudes: Legislative Processes	Roll-Call Votes: Factor I	Roll-Call Votes: Factor II	Roll-Call Votes: Factor III
Demographic						
Age		X				
Education Attainment	X	X			X*	
Occupation (SES)			X*	X	X*	
Income					X	X
Attitudinal						
Educational issues	-	-	-	X	X	
Educational lobbyists	-	-	-			X*
Legislative processes	-	-	-			
Regression Equation Summary:						
Total Multiple R	.620	.673	.573	.509	.762	.851
Total Multiple R Squared	.384	.453	.334	.259	.581	.724
F Ratio	2.851	1.866	1.946	1.354	4.022	8.763
df	7/32	12/27	8/31	8/31	10/29	9/30
Level of Significance	.05	NS	NS	NS	.05	.05

Key to table symbols:

X Variable met one percent explained variance criterion, included in regression equation, but F value for beta weight was not significant at .05 level or beyond.

X* Variable met one percent explained variance criterion, included in regression equation, and F value for beta weight was significant at the .05 level or beyond.

\- Variable not applicable, not entered for possible inclusion in regression equation.

The prediction of senator's Legislative-process attitudes produced nonsignificant regression equations in both studies. In reviewing specific predictor variables, the researchers found little similarity between the two studies. In Oregon there were two predictors, both in the aggregate classification. This study revealed two aggregate, three demographic and three structural; no particular type was dominant.

The educational voting patterns in Oregon proved reducible to four factors that included twenty-one of an original twenty-nine bills and accounted for 55 percent of the total variance among the bills. The four factors related to School Board Power and Citizen Participation, to Appropriations and Development, to School Technical Services, and to Educational Concern. This compares with fourteen bills out of twenty-one in Kansas, which reduced to three factors: Legislative Delegation of Power and Responsibility, Program Development and Enhancement, and Administrative Procedure, Establishment and Review. The present study revealed some predictability between aggregate, structural, demographic, and attitudinal variables and roll-call voting behavior whereas the Oregon study revealed little, if any, predictability. The Kansas study revealed two of the three regression equations as significant at the .05 level whereas the Oregon study found one of four significant.

Since factors are not the same, it might be revealing to review the similarity or lack of such between them. In the Kansas study, Factor I (Legislative Delegation of Power and Responsibility) included bills that delegated descision-making responsibilities formerly held by the state to the local school boards. For example, authorization to enter into co-operatives, ability to acquire land, ability to increase budgets through appeal, wider parameters in the interpretation of the retirement laws,

and defining local responsibilities in due process. The Oregon study had four factors, and in review of the specific bills making up the four factors it is evident the same type of bills were considered. Factor I in the Oregon study was labeled School Board Power and Citizen Participation. Oregon's Factor I contains the same type of bills as the Kansas Factor I.

Factor II (Program Development and Enhancement) in Kansas included bills specifically dealing with new financing methods and development of new programs. In Oregon those types of bills are found in Factor II (Appropriations and Development) and Factor IV (Educational Concern).

Administrative Procedure, Establishment and Review (Kansas Factor III) seems to be similar to the Oregon Factor III (School Technical Services). In Kansas this had to do with accounting systems, investments, and sabbatical leaves, whereas in Oregon it had to do with school attendance supervisor qualifications, regulations for private schools, and regulations for school social work.

Implications

The implications for the type of research presented herein are vast, varied, and complex. The researchers view the major theory and research implications as including the following: (a) Continued efforts should be made to relate global, structural, and analytical variables to attitudes and policy outcomes, using larger and more diversified groups. Such efforts should also focus on the viability of alternative conceptual models, including the general systems model, since the present study raises some questions about the applicability of the legislative model as proposed

by Zeigler and Johnson. (b) The impact of the mass media needs to be considered as a possible influence on voting behavior. If the legislator is truly representative of his constituency in his legislative actions, who or what influences that constituency? (c) The impact of key influentials on the legislators' behavior needs to be examined. Who are these influentials? Are they within or outside the formal political structure? What kinds of actions do they take in attempts to influence educational policy decisions? What roles of influence do boards of education, superintendents, and teacher organizations play and with what degree of success? (d) What conceptual modifications are necessary in investigating educational policy making when the unit of analysis shifts from the local to the state to the federal levels?

Implications for practice in the broad context of educational administration include: (a) The school administrator has a role to fulfill in keeping the community aware of needs, programs, and problems. Communication lines between educational interest groups and the legislative system need to be developed, maintained, and used. (b) The educational community and its leadership need to keep abreast of actions of the elected representatives and to use constituency spokesmen to provide both positive and negative feedback to the district's legislators. (c) Both pre-service and in-service programs for educational administrators should include components dealing with influence processes and the broad area of the politics of education.

Summary

In this study an attempt has been made to approach educational policy-making by examining the complex interplay among environmental forces; the characteristics of political systems; the personal characteristics, attitudes

and behaviors of the policymakers; and the educational policy outcomes. Use was made of secondary data sources to carry out the research study on the educational outcomes, a post hoc research design, and to combine a variety of variables into a system to analyze educational decision-making. In addition, some foundations have been built for further theory development on the effect of political variables on educational decision-making within legislative bodies.

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