

ADMINISTRATIVE ENVIRONMENT AND SCHOOL STRUCTURES

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ABSTRACT

The establishment and support structures through which school policy is decided, implemented and co-ordinated is an important aspect of school management. This paper considers the different types of co-ordinative structure which exist in schools and the relative importance of each type in different system-wide environments. Among other things the results suggest that in secondary schools within systems where more authority is devolved to schools, there are more extensive 'horizontal' and 'overarching' co-ordinative structures. The paper also considers the centrality of influence over, and participation in, decisions about four major aspects of school policy and concludes that for secondary schools the administrative pattern of the system is reflected in its schools.

Introduction

An important theme in the study of organizations has been the co-ordination of the various sub-units within an organization (Ouchi, 1978). Studies concerned with that theme have examined both the form of the structures established to co-ordinate activities and the extent to which co-ordination actually takes place. In the literature concerned with schools as organizations two contending views have predominated in recent years. One has envisaged schools as rational bureaucracies with explicit lines of communication between elements at different levels (e.g. Corwin, 1974) while the other has viewed schools as decentralized structures with little co-ordination of teaching processes or the curriculum (Meyer and Rowan, 1977). In the case of secondary schools the development of coherent programs amid the disparate activities of separate subject departments has emerged as an important focus of much argument about the purpose of schools (Cusick, 1982).

It has been suggested that the internal structures and procedures in organizations are influenced by the external environment in which they operate (Meyer et al, 1978). The internal structures in organizations with apparently similar functions appear to be different in different environments. Among potential environmental influences on organizations the role of other organizations looms large (Hall et al, 1977). In the case of secondary schools one would expect the nature of the education system to be a major influence on internal structures.

The present paper is concerned with the co-ordination structures in secondary schools operating in systems which are characterized by different degrees of devolution of authority to school level.

Types of Co-ordination Structures

Some co-ordinative structures have broad areas of responsibility. For example, staff meetings are typically concerned with communication about, and discussion of, policy and administrative matters which are relevant to the whole school and not simply a sub-unit within it. School-wide curriculum committees may be directed towards one aspect of the schools operation (albeit a central aspect) but they are concerned with the curriculum across all grades and all classes within grades. These bodies could be considered to have an 'over-arching' scope within a school.

Other structures have a more constrained or focussed scope. Year or grade level meetings of teachers are concerned with 'horizontal' co-ordination of the activities students experience in one year. Subject groups are concerned with 'vertical' co-ordination of the sequential experience of students moving from one year to the next in a given discipline.

In the present paper an examination is made of the extensiveness of 'overarching', 'vertical' and 'horizontal' management structures in secondary schools in different organizational environments.

Centrality of Influence

To complement analyses of the co-ordination structures established in schools the paper examines the points within school organization at which decisions were made about a number of policy areas. It considers whether those decisions are made centrally, within a sub-unit (the department), or by an individual teacher. Within each of the first two levels it considers the extent of participation of relevant staff. Thus, the idea of centrality of influence is considered to be comprised of two components: the level at which the decision is taken, and the extent of participation. Four broad policy areas are considered: instruction, general curriculum policy, administration, and resource allocation. These four policy areas represent a clustering of 12 individual policy matters based on the results of a factor analysis reported elsewhere (Ainley, 1982).

The Propositions Investigated

The propositions investigated derive from a consideration of the traditional model of a secondary school and the ways in which that might have been expected to change in response to changes in the structure of education systems.

The Traditional Secondary School

Studies in the United States have suggested that different organizational models should be applied to secondary schools than to primary schools (Firestone and Herriott, 1981). Those studies suggest that there is more decentralization of decision making and less goal consensus in secondary than primary schools. Such results are consistent with three aspects of the pattern of school organization in traditional secondary schools. First, co-ordinative structures have evolved which reflect the specialization of expertise which has been assumed to be central to the mission of the secondary school. Since the curriculum is differentiated into separate subject areas the co-ordinative structures have been based on subject areas. Secondly, secondary school teachers have studied intensively in a particular discipline before training to be teachers. To a large extent they draw their authority from their expertise in a particular subject area. This background tends to result in support for co-ordinative structures concerned with the progression of students through a sequence of material in a subject area. In short, it would result in vertical structuring around subjects. Thirdly, the dominant form of accountability for secondary schools is through public examination at the end of Year 12: examinations which are based on subject disciplines. The pervasive influences of these examinations would be expected to support subject based 'vertical' co-ordination structures in secondary schools.

The complex and differentiated curriculum of secondary schools would tend to militate against central influence in curriculum decision. The authority base of the principal would tend to reinforce this tendency. As former teachers principals would be aware of limits to their authority in subject fields in which they could claim no formal expertise. In addition it has been argued that because teachers perceive their classrooms as zones of autonomy there exist other barriers to the involvement of others in decisions about teaching. Hence, in traditional secondary schools the main level of decision making about curriculum matters is the subject department or the individual teacher. However in schools formally established as bureaucracies a strong central influence could be exercised over administrative matters and within subject departments there might be little participation in decision making.

Changes in Education Systems

An enduring theme in discussions of Australian education up to the sixties was its uniformity and its centralized bureaucratic control (see Kandel, 1937; Butts, 1955). Since 1960 many aspects of government education systems have changed. One aspect of those changes has been a

greater devolution of authority to school level for both curriculum and administration. The rationale for this change partly involved a wish to encourage diversity in educational practice so that the school curriculum could be more responsive to local circumstances. This was most clearly manifest in the proposition concerning school based curriculum development (Skilbeck, 1978). In addition the rationale involved management considerations that decisions should be made as close as possible to the point of implementation so that those implementing policy were committed to it and so that factors which might impede its implementation could be taken into account (Schools Commission, 1978).

The devolution of authority to school level has usually been accompanied by the establishment of local boards or councils with either advisory or decision-making power. For that reason the chain of responsibility for policy was altered from one which could be seen as linear and hierarchical to one which was more complex with multiple orientations.

Since the move towards devolution of authority to school has not been uniform across the seven systems there exists natural variation between systems. This paper makes use of those variations to test whether differences in the extent of devolution of authority to schools are associated with differences in the organizational structure within schools.

Co-ordinative Structures

It was noted above that a centralized system environment would tend to support the predominance of vertical co-ordinative structures in schools based on subject departments. It might therefore be reasonably proposed that in less centralized systems that support might not be so strong and that other co-ordinative structures within schools would be more important than in centralized structures. In addition the existence of complex chains of responsibility with multiple orientations in decentralized systems would seem likely to be supportive of 'horizontal' and 'overarching' co-ordinative structures in secondary schools. While a central authority may in practice emphasize the work of subject departments through recognition of contributions in those areas for promotion, a local board or council seems likely to emphasize the total program of the school and the coherence of the programs at each year level. As a result of these considerations three related propositions are tested in the present paper.

- 1 Secondary schools in systems which exhibit greater devolution of authority will report more extensive 'horizontal' co-ordinative structures than schools in systems with less devolution of authority.
- 2 Secondary schools in systems which exhibit greater devolution of authority will report more extensive 'overarching' co-ordinative structures than schools in systems with less devolution of authority.
- 3 Secondary schools in systems which exhibit greater devolution of authority will report less extensive 'vertical' co-ordinative structures than schools in systems with less devolution of authority.

Centrality of Influence

It has been noted in a previous section of this paper that in secondary schools there was a tendency for decisions about instruction to be taken within subject departments but for administration to be more centrally controlled. Under conditions of greater devolution of authority in a school system it is possible to imagine two possible effects on school decision making. The first possibility is that the process of decision making in the school might mirror that of the system environment of which it was part. Under that possibility one would expect less centrality of influence over decisions in schools which were part of a decentralized system. Co-ordinative structures under such a proposition would be participative and more involved in sharing and building consensus than in directing action. The other possibility is that the process of decision making in schools might be more centralized if the environment of the school system was less centralized. This possibility might be considered a compensating model of school organization. In view of research literature concerned with other types of organization it seemed more reasonable to propose the first of these possibilities, that the processes of decision making in the school would mirror those in the system of which it was part. Hence the research propositions were as follows:

- 4 Secondary schools in systems which exhibit greater devolution of authority to schools will report less centrality of influence in decision making than schools in systems with less devolution of authority.
- 5 Secondary schools in systems which exhibit a greater devolution of authority to schools will report greater participation in decision-making than schools with less devolution of authority.

Methodology

This paper is based on secondary analyses of data collected in a survey which was conducted as part of the ACER Staffing and Resources Study (Ainley, 1982). Principals of some 268 government secondary schools responded to a questionnaire. The response rate to the sample of schools was over 85 per cent. Details of the sample and the response rate from each state have been provided elsewhere (Ainley, 1982). Part of the information concerned the co-ordination structures in schools and the levels at which decisions about a number of policy issues were taken.

The Independent Variable: System Devolution

The independent variable in this study was based on studies by Deschamp and McGaw (1979), and McKenzie and Keeves (1982) who characterized the public education systems of Australia in terms of the extent of devolution of authority to schools in curriculum and administrative matters. In practice the extent of devolution was similar in both areas so that the public education systems were categorized on a single dimension. The categories are shown in Table 1.

Table 1 Levels of Devolution of Authority in School Systems

| Level of Devolution | Systems | Curriculum Development ^a | Administration ^b (rank order) |
|---------------------|------------------------------|--|---|
| Low | New South Wales | Central aims and curriculum guides | 4.5 |
| | Queensland | | 6.5 |
| | Western Australia | | 6.5 |
| Middle | South Australia | Central aims and school based curriculum development | 3 |
| | Tasmania | | 4.5 |
| High | Victoria | School aims and curriculum development | 1.5 |
| | Australian Capital Territory | | 1.5 |

^a Based on the analyses presented by McKenzie and Keeves (1982:22)

^b Data is the rank order of aggregates computed from data on 10 items of administration presented by McKenzie and Keeves (1982:26)

The Dependent Variables

Two types of dependent variables have been used in the present paper: one concerned with co-ordinative structures and the other with centrality of influence.

Co-ordinative structures. Variables representing the importance in the school of school-wide curriculum committees (overarching structures), year level meetings (horizontal structures), and subject departments (vertical structures) were constructed. If the structure did not exist or met on an irregular basis it was assigned a score of 0. If the group met on a regular basis it was given a score corresponding to the number of times it met per year. This was based on transforming the original responses (of one per week, one per term, etc.) which formed an ordinal scale to the interval scale of number of times per year using information about the length of the school year. In brief a higher score indicates that the structure is more important to the schools operation.

Centrality of influence. The basis of scores on the four variables concerned with centrality of influence were responses from principals indicating who determined policy in 12 areas. The responses could range from 'the principal alone' to 'the individual teacher': eight response categories were possible for each item. These responses were used in two ways.

The first was to indicate centrality of decision making by coding whether policy about the issue was decided at school level, at subunit level, or at classroom level. The scores for each of the four main areas described earlier in this paper were obtained by adding the scores on each of the items taken as indicators of that area.

The responses were also used to indicate whether policy was decided hierarchically (e.g. the principal alone, the head of department alone), collaboratively (e.g. the head of department and the staff) or individually. Scores for each of the four main policy areas were obtained by adding the scores on each of the items forming the policy area.

Analysis

The method of analysis was a one way analysis of variance using system devolution as the independent variable with three levels. Analyses were repeated for each of the dependent variables described. The value of the F ratio was used to indicate whether differences between types of system environments were statistically significant.

Results

Structures. Results concerned with co-ordinative structures in secondary schools in different types of education systems are recorded in Table 2. From those data it can be seen that there is a more extensive presence of school wide curriculum committees (an overarching structure) in schools within systems with a greater devolution of authority than in systems with less devolution of authority. The data support proposition 1. It can also be seen from these data that proposition 2 was also supported. The extensiveness of year level meetings was greater in the schools of more decentralized systems than in those of less decentralized systems. Proposition 3 was also supported by the data. There was a significant difference between schools in different types of education systems with regard to the extensiveness of meetings of subject department staff. Subject department meetings were more extensive in schools in centralized systems.

Table 2 Extensiveness of School Structures

| Structure | Devolution in System | | | N Schools | F ratio | Significance |
|----------------------|----------------------|--------|------|-----------|---------|--------------|
| | High | Medium | Low | | | |
| Curriculum Committee | 10.5 | 9.4 | 2.6 | 231 | 13.96 | <.01 |
| Year Level Meeting | 9.2 | 5.6 | 4.4 | 226 | 4.24 | <.05 |
| Subject Area Meeting | 16.4 | 16.7 | 25.6 | 239 | 10.94 | <.01 |

Note:

Mean values recorded are based on a scale indicating the number of times the group met each year. Where the structure did not exist or met irregularly a score of 0 was assigned.

Table 2 provides an indication of the extensiveness of different types of structure in schools. It combines the issue of whether the structure exists with frequency of meeting. More detail is contained in Tables 3 and 4. Table 3 indicates the percentages of schools where such structures exist.

Table 3 Percentages of Schools Reporting the Existence of Various Structures

| Structure | Devolution in System | | | N Schools | Chi-a Square (2df) | Significance |
|----------------------|----------------------|--------|-----|-----------|--------------------|--------------|
| | High | Medium | Low | | | |
| Curriculum Committee | 59 | 45 | 21 | 231 | 24.80 | <0.01 |
| Year Level Meeting | 67 | 51 | 33 | 226 | 17.49 | <0.01 |
| Subject Area Meeting | 95 | 96 | 91 | 239 | 1.97 | ns |

^a The chi-square value reported is for 3x2 contingency table from which the percentages were derived.

Table 4 Mean Number of Meetings per Year where Structures Existed

| Structure | Devolution in System | | | N Schools | F ratio | Significance |
|----------------------|----------------------|--------|------|--------------|------------|--------------|
| | High | Medium | Low | | | |
| Curriculum Committee | 17.7 | 21.1 | 12.3 | 100 | 3.81 | <.05 |
| Year Level Meeting | 13.7 | 10.8 | 13.2 | 106 | 0.55 | ns |
| Subject Area Meeting | 17.3 | 17.4 | 27.1 | 222 | 17.77 | <.01 |

Note:

Mean number of meetings per year for those schools where a structure was reported to exist and meet regularly.

Table 4 indicates the frequency of meeting for each group, in those schools where such groups existed. The data in Tables 3 and 4 taken together indicate that between the different types of system environments there were differences in both the percentage of schools reporting the existence of curriculum committees (more were reported in the more decentralized systems), and the frequency of meeting (more frequent meetings in systems with a medium and high amount of devolution of authority). Year level meetings were reported by a higher percentage of schools in the more devolved systems but there was no significant difference between system types in the frequency of meeting where the structure existed (about once per month). By contrast there was no difference across types of system environment in terms of the percentage of schools reporting subject area meetings but there was a significant difference in the frequency of meeting (more frequent meetings in more centralized systems).

Centrality and Participation. In Table 5 data relating to centrality of influence is presented. There is less centrality of influence over decisions related to instruction (content and methods) and administration (expenditure, homework, assessment etc.) in schools with decentralized than centralized systems. In relation to resource allocation (teachers to classes, non-teaching duties, and ancillary staff) and general curriculum policy no significant differences exist between types of education system.

Table 5 Centrality of Influence in Decision Making

| Policy Area | Devolution in System | | | N Schools | F ratio | Significance |
|---------------------|----------------------|--------|------|--------------|------------|--------------|
| | High | Medium | Low | | | |
| Instruction | 2.24 | 2.06 | 1.96 | 231 | 10.53 | <.01 |
| Administration | 1.43 | 1.37 | 1.33 | 214 | 3.30 | <.05 |
| Resource Allocation | 1.33 | 1.23 | 1.25 | 223 | 1.59 | ns |
| Curriculum Policy | 1.08 | 1.05 | 1.15 | 230 | 1.95 | ns |

Note:

Mean values recorded have been based on the following scale:

- 1 = centrally determined (the principal alone, the principal and senior staff, the principal and whole staff, the principal and individual staff)
- 2 = sub-unit level (the head of department alone, the head of department and staff, the head of department and individual teachers)
- 3 = classroom level (individual teachers)

The data in Table 5 also indicate the level at which decisions were taken. Decisions about instruction were mainly taken within subject departments, and administrative decisions were taken more at school level but there was evidence of more of these decisions being made in the subject department in decentralized systems. Resource allocation decisions and those concerned with curriculum policy were taken centrally.

The data in Table 6 support the fifth proposition, which was concerned with participation in policy formation. In all four of the policy areas considered there was wider participation in decision making in schools within the more decentralized systems than in schools from the more centralized systems.

Table 6 Participation in Decision Making

| Policy Area | Devolution in System | | | N Schools | F ratio | Significance |
|---------------------|----------------------|--------|------|-----------|---------|--------------|
| | High | Medium | Low | | | |
| Instruction | 2.27 | 2.03 | 1.98 | 231 | 13.40 | <.01 |
| Administration | 1.71 | 1.55 | 1.43 | 230 | 8.73 | <.01 |
| Resource Allocation | 1.75 | 1.74 | 1.61 | 214 | 7.51 | <.01 |
| Curriculum Policy | 1.26 | 1.24 | 1.16 | 223 | 3.42 | <.05 |

Note:

Mean values have been recorded on the following scale:

- 1 = hierarchically determined (the principal alone, the principal and senior staff, the head of department alone)
- 2 = collaboratively determined (the principal and the whole staff, the principal and individual teachers, the head of department and staff, the head of department and individual teachers)
- 3 = individually determined

Conclusions

Two important issues in complex multifaceted organizations like secondary schools concern co-ordination and participation. Co-ordination is important so that students can experience a coherent program both in any year and when they move from one year to the next. This co-ordination needs to consider the whole program (overarching structures), the program in any year level (horizontal co-ordination), and the sequence of a program from one year to the next (vertical co-ordination). The data in this paper suggest that there were additional forms of co-ordination in those systems where authority was devolved to schools in conjunction with other local agencies of governance. Schools in such education systems reported more extensive 'overarching' and 'horizontal' co-ordination structures than those in systems with less devolution of authority to schools. The best explanation of this observation would appear to be in terms of the different chains of responsibility which develop in such systems. More complex chains of responsibility with multiple orientations (e.g. to the school council as well as to the central authority) appear to promote structures in schools concerned with the whole program of the school and the coherence of the program experienced at any year level. The co-ordination structures in schools provide the vehicles through which general goals are translated into practical policies. Not all goals concern the sequence of progression through subject areas so the nurturing of co-ordination structures other than subject departments is important.

Participation is important so that decisions which are taken reflect the contingencies which affect the operation of sub-units within the organization, and so that the commitment of relevant participants to policies is secured. This paper suggests that decision making is less centralized and more participative in schools which themselves form part of systems with a greater degree of devolution of authority. In brief the administrative pattern of the system appears to be reflected in its schools.

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