

WHAT MAKES A GOOD SCHOOL?

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Background

Against the backdrop of senior secondary school reform in South Australia and the need to expand our knowledge and understanding of effective senior secondary schooling, this study set out to investigate the nature and strength of the relationships between effective school indicators and a school outcome measure that reflects the purposes of senior secondary schooling established recently in South Australia.

Senior Secondary education is emerging as a concept that identifies the later years of secondary schooling as a distinctive entity. In 1996, the South Australian Department of Education and Children's Services (DECS), now DETE, the Department of Education, Training and Employment, and the Senior Secondary Assessment Board of South Australia (SSABSA) circulated draft documents outlining changes to the design of curriculum, the purposes and goals of schooling, assessment and teaching practices, and desired outcomes of senior secondary education.

The DECS' document "Towards a Framework for the Senior Years of Schooling" acknowledges the significant economic and social changes that provide the context for all schools and confront the students completing secondary education. The purposes of schooling, according to this document, are to support all students gaining skills, understandings and credentials to participate effectively in the workplaces and the society of the future. The new framework aims to "provide a senior secondary education that is more inclusive of the needs of students, their requirements

for future employment, [and for] further education and training..." (p. 8).

The new framework emphasises three outcomes of the senior years of schooling that all students are entitled to before leaving school. Each student has:

experienced success in the curriculum she or he has studied.
actively participated in the effective functioning of ethical and democratic relationships within the school community.
gained a nationally portable credential that provides possible entry into a number of post-school options.

These changes come hard on the heels of major curriculum reform introduced in 1992 in the form of the South Australian Certificate of Education (SACE). The SACE was developed to meet community expectations that school-leavers should be attaining a broader education with skills and knowledge to be successful participants in Australian society.

Minimum levels of literacy and numeracy should be achieved together with an understanding of Australian society. Students studying for the SACE undertake a balanced course of subjects, usually over two years, Stage 1 (Year 11) and Stage 2 (Year 12). Successful completion of the SACE signifies students' preparedness to enter post-school studies and work. The SACE curriculum was specifically developed to provide more flexible and coherent pathways to further education, training, work, and community life (SSABSA, 1996).

To support these purposes, schools are introducing the competency based

VET curriculum into SACE Stage 1 and 2 studies to meet the needs of the increasingly more diverse senior secondary student population for a relevant curriculum.

The new framework document acknowledges that the curriculum is only one ingredient in providing the community with quality schooling. Schools are complex organisations that achieve desired outcomes through the interaction of the curriculum, the learning culture, leadership practices, teaching practices and organisational processes associated with effective schools. The quality of the interaction between these factors enables schools to provide desired outcomes. Clearly, the schools that reach their objectives deserve to be identified as effective schools. However, not all effective schools would be judged as good schools. Reaching consensus on what makes a school good is inherently problematic because of its subjective nature which is in large part dependent on the criteria used to make the judgement. Like beauty, it is in the eye of the beholder.

This study is an extension of an earlier study in which several path models were tested to examine a range of indicators related to the Australian school community's view of quality schooling for the nature of their relationship with achievement measures of school performance. Two school outcome measures were used (School Effects and School Achievement) against which the influence of four indicators of quality schooling were tested: students' attitudes to school life; approaches to learning; academic self-concept; and teachers' perceptions of

leadership. The small number of schools employed in this earlier study prevented the testing of a complex model including all the variables used to examine the nature and intensity of their relative influence on each other and on teachers' perceptions of school organisational and process variables and academic achievement. It was thought that the examination and testing of such models of school effectiveness would throw light on research questions identified by Reynolds and Packer (1992) as important to address in the 1990s "the study of how school process factors have their effects, which process factors may lead to the determination of other process factors and the study of the interaction between factors" (p.175).

Factors that influence school outcomes

A number of common characteristics have been identified in research on effective schools. Wildy (1991) lists: strong instructional leadership, emphasis on building a supportive climate, an academic focus and high expectations, a shared sense of mission and clear goals, performance monitoring, quality teaching and staff development, parental involvement and district support (p. 168).

A review of the United Kingdom effectiveness research (Reynolds, Sammons, Stoll, Barber, & Hillman, 1996) resulted in the identification of nine key factors associated with effective schools. They were: professional leadership, shared vision and goals, a learning environment, high quality teaching and learning, high expectations,

positive reinforcement, monitoring pupil progress, pupil rights and responsibilities and purposeful teaching. Furthermore, Mortimore's (1996) meta-analysis identified the same nine factors and added two more key characteristics of effective schools: home-school partnership and a learning organisation (school-based staff development).

With regard to leadership, Bass and his associates (Bass, 1985; Bass & Waldman, 1987) have put forward a model using constructs of transformational and transactional leadership. The model advocates transformational leadership for successful organisational change and improved school performance. Transactional leadership engages followers in an exchange relationship that focuses on their basic needs and applies rewards and sanctions to achieve productivity and efficient management (Bass, 1985). Skills of planning, coordinating, scheduling and regularising have been associated with transactional leadership and the concept of leader as manager (Crawford, 1988). Transactional leadership may enable an organisation to operate effectively and efficiently, but it does not develop in followers the level of trust, loyalty and enthusiasm that is associated with transformational leadership. Beare et al. (1989) noted that although much of the principal's role involves transactional leadership, if excellence is the goal, then transformational leadership practices must prevail.

Current publications on school effectiveness research are replete with critiques of the methodological approaches used to judge and measure relative effectiveness of schools. One of the issues that continues to

appear and re-appear in the reviews of the literature is the size and significance of effects (Sammons, 1996). In a recent review of school effectiveness research, Sammons concentrated on school effects pointing out that classroom level effects as indicators of teacher effectiveness were beyond the scope of her review. Increasing numbers of studies are examining both school and class effects simultaneously, some of which suggest that class effects can be larger than school effects (Hill & Rowe, 1996; Hill, Rowe & Holmes-Smith, 1995; Reynolds, Sammons, Stoll, Barber & Hillman, 1996). Others claim greater variation between schools than classes (Bosker, 1991; reported in Luyten, 1995).

The present study concentrates on school effects in line with Sammon's (1996) argument that:

effects on students of being a member of a particular school over a period of several years remain of considerable practical and theoretical relevance. This is because a student's educational experience commonly involves being taught by several different teachers in different years at the primary level, and a number of subject specialists at the secondary level in each year. Students and their parents may have (usually constrained) opportunities to choose schools, but not individual classes or teachers. Moreover, students spend several years in specific institutions and therefore the question of whether over several years the school attended has an impact on educational outcomes is important. (p.115-116)

Method

Sample

Sammons (1996) points out that a major limitation of many studies of school effectiveness is the narrow nature of the sample of schools used for the analyses (mostly inner city schools). This study employed an appropriately diverse sample of 41 senior secondary schools which is approximately a quarter of the total secondary schools in South Australia. Data were collected from approximately 500 teachers and 1300 students from Years 11 and 12. The sample included 22 Government, 13 Independent schools and 6 Catholic schools; 3 all-boys, 6 all-girls and 32 coeducational; 38 metropolitan and 3 country schools.

In each school, approximately 30 students completed one of three questionnaires; the School and You Questionnaire (Ainley, 1990) providing information on students' attitudes to school, the Learning Process Questionnaire (Biggs, 1987) assessing students' deep, surface and achieving approaches to learning, the Self Description Questionnaire-III (Marsh & O'Neill, 1984) measuring students' academic and non-academic self-concept. Additional information related to gender and SES was collected from the students responding to these questionnaires, including mother's and father's occupation and residential postcode. Student and SES variables will be examined in subsequent analyses.

Twenty teachers from each school completed the two-part, Leadership in Schools Questionnaire (Silins, 1994a; Silins & Murray-Harvey, 1995) providing information on eight aspects of leadership and four school effects related to student performance, school curriculum, teacher effects and school culture.

Criterion Measure

A range of school performance measures was collected, including tertiary offers success rate, participation rate, school retention rate, SACE retention, participation and completion rates, and averaged aggregated SACE scores. For this study, tertiary offers were used to calculate a Tertiary Offers Index: the number of tertiary offers to university or TAFE divided by the school's corresponding grade cohort. This Index accounts for two of the post-school options available to students completing their SACE and relates to DETE's desired outcomes for senior secondary schools.

The School as the Unit of Analysis

The focus of interest in this study was necessarily the school since the study examined school level factors associated with an indicator of school performance. Although student and teacher data were obtained from each school, only the teacher data were used for the analysis reported here. The Leadership and School Effects variables were drawn from the teacher data which were then aggregated to the school level.

Because this study aggregates teacher data to the school level, it may suffer from small amounts of aggregation bias. This short coming could be overcome through the use of multilevel analysis.

Path Model

Seven latent variables were included in the model which examined the influence of the explanatory background variables on School Performance measured by university and TAFE entry success and based on data from 38 senior secondary schools. The number of variables in the path model was restricted by the number of cases for which complete data were available. Three schools were dropped because of insufficient teacher responses. The factors selected for study were based on a review of the effective schools' literature and the South Australian Department of Education, Training and Employment's purposes of senior secondary education and preliminary correlation analysis. A combination of contextual external and internal influences on the organisation and functioning of schools were selected from the larger data base.

External predictors were Sector, Type and Size of school. The internal organisation predictors were based on teacher responses and included Leadership Effects, School Effects (related to curriculum, teacher development and culture) and Student Effects (students' attitudes, learning and involvement). Table 1 presents a description of the variables in the model.

Path Analysis

The path model was tested using a latent variables partial least squares path analysis (PLSPATH) procedure (Sellin & Keeves, 1996). The initial design of the model is fully recursive wherein each variable was positioned as it was predicted to influence the succeeding variables in the model. Along with the contextual factors (Sector, Type and Size), Leadership factors and the internal school organisation factors depicted as School Effects were hypothesised to influence Student factors. Leadership, School Effects (curriculum, teacher, culture) and Student Effects (attitudes, learning and school involvement) were depicted as mediating variables by their placement between the antecedent external variables and the criterion variable, School Performance.

Data were collected from three school sectors, Government schools, Independent schools and Catholic schools. In this analysis, Sector was dealt with as a single variable. Each school sector component was treated as a category with binary coding. To obtain dummy coding, one category was dropped to eliminate redundant information. In this case, the Catholic schools category for Sector was eliminated. Similarly, three types of schools provided data, all-boys, all-girls and coeducational schools. The category of all-boys schools was dropped to obtain dummy coding for Type.

Analysis proceeded in two stages. First, the outer model was refined by

successively deleting the manifest (direct measure) variables that did not contribute to explaining the latent variable (construct). All measures that had a loading (in the same sense as a principal components analysis) of at least twice their standard error were retained. Once the outer model was stable, the inner model was refined. Again, all paths were deleted where the path coefficient (similar to regression coefficient) was less than twice its standard error.

The final model presented in Table 2 shows the variables that exerted can effect on both the outcome variable and the other latent variables in the model. Direct, indirect and total effects are reported along with the jackknife standard errors and correlations.

Results

All the factors included in this model contributed directly or indirectly to School Performance. Two variables emerged as strong predictors of School Performance. Sector exerted a strong direct and indirect effect and emerged as a dominant factor in terms of total effects on Performance. The positive effect of Sector is mainly due to the influence of the Independent Schools. Student Effects exerted the strongest direct effect on School Performance.

The combined effect of variables in this model explained 71 per cent of the variance on School Performance. The variables exerting the strongest direct effects were split between external and internal

predictors of school performance. In order of their effect (indicated by the strength of the standardised path coefficient) they were:

Teachers' assessment of students' attitude, learning and involvement in the school indicating a strong positive relationship;

School sector - represented by independent schools;

Teachers' level of agreement on improved curriculum, teacher and culture outcomes indicating a negative relationship;

Type of school - represented by coeducational schools; and,

Size of school indicating a relationship between larger school size and higher success rate for tertiary offers (allowance having been made for school size).

School Effects exerted a positive indirect effect through Student Effects on School Performance and a stronger negative direct effect.

Since this is contrary to expectation, this result requires some interpretation which follows later. The model indicates that teachers' agreement with improved curriculum, teacher and school culture outcomes is negatively associated with School Performance when measured by tertiary offers success rate.

Leadership exerts no direct effect on School Performance and a small negative indirect effect. The strength of the Leadership variable in the model is related to its highly significant predictor value on School Effects.

Discussion

The final path model (Figure 1) provides a snapshot of characteristics that contribute to successful senior secondary schooling in South Australia. Independent girls' schools of moderate size are more successful at achieving post-school options for their students than larger Government coeducational schools. From the teachers' point of view transformational leadership practices (not transactional) promote improved curriculum, teacher development and school culture outcomes.

The influence of leadership on the school performance criterion is indirect in its impact on teachers' perceptions of students' attitudes, learning and involvement. Teachers' strong sense of improved curriculum, teacher development and school culture, however, does not directly promote post-school options. Teachers' impact on school performance at the school level is through their assessment of students' attitudes, learning and school involvement.

The present study has examined a number of characteristics addressed in previous school effectiveness research against a school performance measure using senior secondary school data. Reasonably strong and stable relationships have been found between internal school process factors such as Leadership, School Effects and Student Effects which incorporate a number of the key factors commonly associated with effective schools. However, the nature of these relationships revealed in the South Australian data are challenging.

Ramsden, Martin and Bowden (1987) found a wide variation between secondary schools in the quality of learning evoked. They suggested that key factors of school effectiveness such as purposeful leadership and teacher involvement in curriculum planning were likely to distinguish schools that appeared to offer more favourable contexts for learning. This study supports the key role played by transformational leadership practices in the internal processes of the school. Teachers' positive perceptions of curriculum, teacher and school culture have the expected positive influence on students' attitudes, learning and involvement but an unexpected negative influence on the outcome measure. Both the indirect effects of leadership on school outcomes and the negative association of teachers' perceptions of school processes with student outcomes have emerged in other studies (Silins, 1992; Silins, 1994a). One interpretation could be that teachers are torn between the traditional focus of their work - students and their achievement, and the professional demands of curriculum reform and greater participation in the management and organisation of the school. A further pressure on secondary teachers is the rapidly changing culture in schools from relative professional autonomy to working more collaboratively and openly. The more that is required of teachers in terms of the increasingly demanding role of participatory management and collaborative professionalism, the less they can give to their central role of promoting learning in students.

Conclusion

The aim of the present study was to expand knowledge and understanding of the processes operating on senior secondary schooling and their relationships to measures of school performance within South Australia.

A model was developed to test the interrelationship of factors measured and their strength and influence on the chosen outcome.

To the extent that DETE's desired outcomes of senior schooling have been taken account of in the model, this examination of the nature and strength of all the relationships becomes an examination of what makes a good school.

Are the predictors of tertiary entry success the kinds of factors we want emphasised in our schools? Schools will work to produce and perpetuate the characteristics that result in school performance measures that are recognised and valued by the community. School characteristics and practices that result in a school being perceived as a good school will be promoted and reinforced, attracting resources and effort.

With the need for increased accountability and response to quality assurance mechanisms, there is a need to develop systems which can provide schools with better feedback about their relative effectiveness. Research into what makes a good school raises issues about the appropriateness of outcome measures and the purposes of

schooling. A range of outcome measures needs to be tested over time to provide schools with information that will encourage the necessary self-evaluation and review for continuous improvement.

Most effectiveness research has been conducted using narrow measures of student academic outcomes (Sammons, 1996; Mortimore, 1992). The adoption of a broad range of outcome measures is advocated both to encompass the all-round development of students and as a better base for judging the effectiveness of schools. Subsequent research will assess the impact of these same background predictor variables on a further set of outcome measures including completion rates, retention rates and participation rates. Having examined the impact of internal and external school influences on a relatively narrow outcome measure of school performance, further research will examine a range of alternative indicators which have, in previous research (Silins & Murray-Harvey, 1995) been identified as important components in any study of good schooling.

Table 1 and Figure 1 can be obtained from the authors.

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Table 2. Latent Variables Direct, Total and Indirect Effects and

Correlations for Model

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Variable Direct JknStd Total Indirect Correlation

Effects Error Effects Effects r

TYPE OF SCHOOL R2= .171 (Q2=.05)

Sector -.4130 .17 -.4130 -

-.4130

SIZE OF SCHOOL R2= .294 (Q2=.21)

Sector -.3505 .10 -.4719 -.1215 -.4719

Type .2941 .12 .2941 -

.4389

SCHOOL EFFECTS R2= .761 (Q2=.71)

Sector .2466 .10 .2466 - .3662

Leadership .8006 .10 .8006 - .8375

STUDENT EFFECTS R2= .558 (Q2=.46)

Sector .6830 .08 .6133 -.0697 .6492

Type - .0896 .0896

-.3608

Size .3046 .14 .3046 -

-.0926

Leadership - .2404 .2404 .1301

School Effects .3002 .11 .3002 - .4744

SCHOOL PERFORMANCE R2 = .714 (Q2=.57)

Sector .4237 .17 .6267 .2030 .5966

Type -.3210 .15 -.2042 .1169 -.4849

Size .2546 .13 .3974 .1428 -.0317

Leadership --.2017 -.2017 -.1917

School Effects -.3926 .15 -.2519 .1407 -.0227

Student Effects .4686 .16 .4686 - .6497

Note: JknStd refers to the Jackknife Standard Error of the Direct

Effects path coefficient.

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