The relationship between leadership practices and organisational culture: an education management perspective

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The relationship between leadership practice of the principal and school culture was investigated and recommendations on the skills principals need to establish a school culture conducive to teaching and learning are provided. Two standardised questionnaires were used to measure the existing leadership practices and organisational culture in 30 schools. Correlations between leadership practices and school cultures were determined by means of linear regressions and portrayed by scatter plots. It was found that each of the leadership practices tested was positively related to either of the two main elements of organisational culture: sociability or solidarity. The findings provided a sound basis for the appointment of principals able to cultivate a positive school culture.

Problem statement and aim

The advent of democratic government in 1994 inaugurated the restructuring of the 19 former apartheid education departments into one national and nine provincial departments. In both the public and independent school sectors, schools range from very effective to dysfunctional. Within the public sector there are excellent schools of which most are racially integrated, but there are also numerous dysfunctional schools, which only achieve a 0–20% pass rate and where the culture of teaching and learning has broken down. Raising the general level of quality in education has become a significant future challenge in South Africa. Teacher unions feel that more attention needs to be given to the entire education system instead of just the final matric exams (Sunday Times, 10 September 2004), with the result that the Department of Education has targeted the improvement of school management as a means of improving the quality of education in South Africa (Business Day, 30 December 2004). Education Minister, Naledi Pandor, said,

> We have a (school) leadership that cannot analyse, cannot problem-solve, cannot devise strategic interventions and plans, cannot formulate perspectives that are directed at achieving success (Business Day, 10 September 2004).

The minister stated further that the dysfunctional culture in numerous schools has led to discouraged learners.

The existence of numerous dysfunctional schools is evident of the fact that initiatives towards improving school management are long overdue because it seems that a culture conducive to teaching and learning has broken down in those schools. It seems that the "liberation now, education later" stance taken during the years of the anti-apartheid struggle not only severely damaged the culture of learning and teaching in schools during the 1980s, but it is still prevalent in many South African schools as illustrated by recent media reports such as:

- The vast majority of schools across the province were empty as pupils stayed at home while their teachers joined the public sector union strike (Sunday Times, 4 February 2005);
- A group of parents and teachers at a small-town high school are demanding the head-

master be sacked because of alleged drinking binges (Sunday Times, 15 Nov 2004).
These types of behaviour portray the prevailing negative culture in many schools and justify
verdicts by the Minister of Education which insist on exposing and removing

> ... those who do not wish to educate, those who do not improve their performance year in
> and year out, and those who exhibit ill-discipline and divert our schools from the learning
> enterprise (Business Day, 30 December 2004).

Analysts and policy-makers have already started to deliver protocols for interviewing new
staff, managing school finances, and other fundamental school functions in an attempt to
improve the culture and leadership in schools (Business Day, 10 September 2004). The
Minister reiterated the fact that school leaders should be "pursuing" staff development as part
of the integrated quality management system introduced to improve the quality of teaching at
schools (Business Day, 10 September 2004).

In the light of the above, it is clear that school leadership needs urgent attention as the
culture of the school, which is largely cultivated by management, influences the performance
and behaviour of the members of that organisation. During a literature search it was found that
little systematic research has been conducted that examines the specific nature of the relation-
ship between leadership and organisational culture. The last concern was also voiced by Block
(2003:318) and although numerous studies have been conducted on the establishment of
organisational culture in education (Kruger 2003; Mentz 1992) and the role of the leader (Singh
& Lokotsch 2005, Waters & Kingston 2005; Kapp 2000), little evidence can be found of
empirical research which attempts to reveal the correlation between the leadership practices
of the principal and an existing school culture. The only evidence of research with more or less
the same incursion is that of Barnett, McCormick and Conners (2000) and Sahîn (2004) who
in both cases conducted a multilevel analysis of the effect of visionary leadership or, in Sahîn's
case, particularly transformational leadership styles on excellence in teaching and school cul-
ture in Turkey, respectively. The resulting causal relationships indicated by Barnett *et al*.
(2000) and Sahîn (2004) reveal that some leadership qualities are required for establishing a
positive school culture.

This problem concerning proper leadership and its effect on culture is further intensified
by the lack of a scientific base for selecting and appointing principals (Steyn & Van Niekerk
2002:207; Heyns 1998:123) who have the ability to cultivate a school culture in which the
teaching staff can perform optimally, so that teaching and learning can flourish. Within the
foregoing hiatus, it can be asked:

> What is the relationship between leadership practices and school culture and how can
> research on this relationship contribute to theory building and praxis in Education
> Management as a discipline?

Fundamental to the solution of the problem, concerning the lack of a sound culture in many
schools in South-Africa, is the selection and appointment of the 'right person for the right job',
implying that school principals need to possess certain leadership abilities to cultivate a
positive school culture. The existing literature on leadership styles and organisational culture
in schools is mostly theoretical as it seldom proceeds beyond a discussion of each in its own
context. Apart from research on the relationship between organisational culture and transfor-
mational leadership (Sahîn 2004), investigations rarely explore the direct relationship between
school culture and leadership. The purpose of this research project was therefore to explore the
relationship between some school leadership practices and organisational culture in schools.
This investigation culminated in a grounding perspective on leadership and organisational

culture and a correlation profile of the relationship between the cultures of particular schools and their leadership in order to serve as a guideline for a possible model for matching applicants, with particular leadership qualities, to schools where the sound organisational culture has broken down.

The relationship between organisational culture and leadership practices: a brief literature overview

According to Schein (1992:1), the contemporary 'father' of organisational culture,

> ...most of us — whether students, employees, managers, researchers, or consultants — live in organisations and have to deal with them. Yet we continue to find it amazingly difficult to understand and justify much of what we observe and experience in our organisational life.

Jones and George (2003:98) and Hargreaves (1992:271) define organizational culture as the set of values, norms, standards for behaviour and shared expectations that influence the way in which individuals, groups and teams interact with each other and co-operate to achieve organisational goals. These cultural elements and their relationships create a pattern that is a distinctive part of an organisation, as personality is unique to the individual (Hellriegel, Jackson, Slocum, Staude, Amos, Klopper, Louw & Oosthuizen, 2004:365). Martins and Martins (2001) clearly distinguish between organisational culture and job satisfaction: whereas organisational culture seeks to describe how employees perceive their organisation's culture, job satisfaction evaluates how the employees feel about their organisation.

When studying organisations within the boundaries of Education Management, it refers to the relationships and interactions within the school, as well as the school's interaction with the external environment. An investigation into the establishment of organisational culture, therefore, implies a study within school boundaries. Goffee and Jones (1996:134) interpret the meaning of organizational culture in terms of the "community" of the organization and particularly in terms of how people relate to one another. The latter implies that the culture of the organisation can be viewed through a lens of sociology, which results in the two distinct human relations: sociability and solidarity. Sociability refers to the sincere friendliness among the members of the organisational community, whilst solidarity refers to the ability of the members of the organisation to pursue shared objectives quickly and effectively (Goffee & Jones, 1996:134). It was also the last two dimensions which formed the basis of one research instrument used in this investigation.

When organisational culture is viewed from such a sociological perspective, it is understandable why Jansen (2002:33) asks why teachers, who hope to bring about change within their schools, seldom succeed. One may well dwell on the reasons for failure, such as lack of coherence, lack of creative inputs and personal commitment, but scholarly research in this regard reveals that the effect of the schools' leadership should never be neglected. Mintzberg (1983:445), the proponent of a great number of leadership theories, contributes to the latter contemplation when he emphasises the power of a leader to affect other people's behaviour and get them to act in certain ways.

Against the background of the introductory quote, where Schein (1992:316) indicates the complexity of organisational life, he argues further that although the culture of an organisation cannot easily be manipulated by managers, leadership remains intertwined with culture formation. This implies that culture is, to a large extent, influenced by the actions of leaders and is thus embedded and strengthened by effective leadership. An investigation by Block (2003:

329), although not conducted in schools but among sales and services organizations, confirms the leadership-culture relationship as it revealed that the participants clearly attributed their experiences of the company culture to the leadership style of their immediate supervisors.

The relationship between organisational culture and leadership can also be extended to the performance of the members in the organization. Keup, Walker, Astin and Lindholm (2003:1) provide some insight into the effect of the culture of the organisation and state that culture clearly affects the way the members of the organisation perceive and attempt their work. A strong organisational culture does not just happen — it is cultivated by management, learned and reinforced by employees and passed on to new employees (Hellriegel *et.al.*, 2004:364; Kruger, 2003:206), meaning that the organisational culture has the potential to enhance organisational performance and individual satisfaction.

Waters and Kingston (2005:14) raise their concern about the current and future states of educational leadership, and in particular the principalship. They also ask questions such as: Who will lead schools of the future and how can we attract the right leaders? If principals, who possess the ability to exert a positive influence over other people, and who inspire, motivate, emotionally support and direct their activities towards achieving the organisational goals (Flores, 2004:297), could be appointed, schools and education would flourish. It is particularly here that the present investigation could make a contribution, because if it could be determined that the aspiring principals reveal the particular leadership behaviour that would cultivate a sound culture in the school, they could be identified as potentially effective leaders.

Empirical investigation

An empirical investigation was conducted in a number of schools to unravel the problem concerning the relationship between leadership practices and school culture.

In a study of this nature, a relational hypothesis / null hypothesis (Cooper & Schindler, 2003:51) is necessary to fully explore the relationship between the leadership practices of the principal and the school culture. This investigation did not merely investigate the correlation between the two variables, but also explored the implication that the existence of, or a change in, leadership practices could lead to a change in the organisational culture. The following hypothesis was therefore formulated:

> A significance exists between the scores of the five leadership practices of principals, namely, challenging the process, inspiring a shared vision, enabling others to act, modelling the way and encouraging the heart, and the two dimensions of organisational culture: sociability and solidarity.

From the above hypothesis the following null hypothesis was set:

> There is no significant relation between the five leadership practices of principals, namely, challenging the process, inspiring a shared vision, enabling others to act, modelling the way and encouraging the heart, and the sociability and solidarity dimensions of school culture.

Research instruments

The interrelatedness between organisational culture and leadership, as set out in the hypothesis was particularized by means of appropriate measuring instruments. In order to reveal possible correlations, the following measurement instruments were used:

- The Leadership Practices Inventory (LPI) of Kouzes and Posner (1993) which measures leadership practices and reveals the leader's behaviour concerning challenging processes,

inspiring a shared vision, enabling others to act, modelling the way and encouraging the heart of others. This instrument was chosen because it has been widely used to measure leadership in organisations successfully. Although it does not allow for the deepest level of culture as defined by Schein (1992) it still provides a base for an analysis of the perceptual realities of the respondents. Because the school answers to the requirements set for an organisation, the LPI can be valuable in dissecting school leadership and particularly those leadership dimensions reflecting the human orientation of the leader, which is so important in organizational culture formation.

- Goffee and Jones's Organisational Culture Questionnaire (1996:135) explores sociability and solidarity as two dimensions of organisational culture, to reveal the prevailing culture of an organisation. The developers of this questionnaire point out that, although these two categories may at first seem not to capture the whole range of human behaviours, they have stood the test of close scrutiny, in both academia and the field of leadership (Goffee & Jones, 1996:134). This particular questionnaire has also been effectively used by various management consultants to investigate the cultures of various organisations. The fact that it has a sound theoretical base, and has to be completed by five members of each school, provides a valid scope of the school's culture and enhances the probability of portraying as bias-free a picture as possible of the organisation under scrutiny. Goffee and Jones's Organisational Culture Questionnaire is also not a lengthy questionnaire making it a user-friendly instrument.

The LPI consists of 30 items requesting respondents to rate the principal's leadership on a five-point Likert scale. The principal's leadership is measured according to the five leadership practices identified by Kouzes and Posner (1993:37-48; 69-73). These practices portray the following:

- Challenging the process, which refers to leadership dimensions such as
    - searching out opportunities,
    - willingness to take risks,
    - innovativeness,
    - treating mistakes as learning opportunities,
    - staying up-to-date, and
    - revealing an experimenting attitude.
- Inspiring a shared vision, which refers to leadership dimensions such as
    - gazing across the horizons of time,
    - enlisting the emotions of others to share the vision by means of their enthusiasm, and
    - showing others how mutual interest can be met through commitment to a common purpose.
- Enabling others to act, which refers to leadership dimensions such as
    - strengthening others,
    - fostering collaboration,
    - building relationships of mutual trust,
    - stressing cooperative goals, and
    - making others feel important, strong and influential.
- Modelling the way, which refers to leadership dimensions such as
    - clarity about their organisation's values and beliefs,
    - keeping projects on course,
    - behaving in a way that is consistent with the existing values,

- making it easy for others to achieve the goals by focusing on key priorities,
- breaking down big projects into achievable steps (small wins), and
- setting an example.
- Encouraging the heart, which refers to leadership dimensions such as
  - giving recognition and encouragement to those who persist,
  - assisting others to climb the steep and arduous,
  - continuing to pursue the vision, and
  - celebrating accomplishments.

The Organisational Culture Questionnaire consists of 14 items, rated as low, medium or high, to which a quantitative rating scale is attached. The questions focus on the two fundamental dimensions of organizational culture, namely, sociability and solidarity (Goffee & Jones, 1996: 135-136).

Sociability is the measure of emotional, non-instrumental relations among individuals and portrays

- friendship that is valued for its own sake,
- social interaction through continuing face-to-face relations,
- continual relation building,
- morale and *esprit de corps*,
- teamwork and sharing of information, and
- freedom to express and accept new ways of thinking.

Solidarity is based not so much in the heart as in the mind and portrays

- dimensions that originate in the mind such as common tasks and goals that will benefit all involved parties,
- mutual interests,
- the group's will to take actions to address poor performance,
- shared organisational standards,
- the collective will to succeed, and
- the mutual pursuit to perform optimally.

Reliability

The two measuring instruments applied could be regarded as reliable as

- the LPI revealed a significant test/retest reliability of > 0.90 and an internal reliability of 0.80 (Kouzes & Posner, 1993:79);
- the Organisational Culture questionnaire had been successfully used by Goffee and Jones, Professors at the London Business School, to determine the culture of organisations such as Unilever and University Business Schools (Goffee & Jones, 1996).

The reliability of the two instruments was determined using the alpha coefficients. The Cronbach alpha coefficients were uniformly high on the data accumulated for this project, revealing a reliability coefficient of 0.9908 for the LPI and 0.8306 for the Organisational Culture.

Validity

The validity of both the instruments used lay in the fact that

- both questionnaires had been standardised;
- the questions in the questionnaire portrayed 'real-life' situations, which was a positive attribute of content validity (Kerlinger, 2000:418; Kouzes & Posner, 1993:80), and

- the items measured were related to the kind of statements participants generally made about their own and other's experiences of best practices (in this case with regard to leadership and organisational culture), thus contributing to the construct validity of the instruments (Cooper & Schindler, 2003: 234; Kouzes & Posner, 1993:80)

Population and sampling

A convenient sample of 30 schools was constituted. Because the aim of this study was merely to explore whether a correlation between leadership practices and school culture did exist, secondary as well as primary school principals were targeted.

An investigation of this nature, requires extensive probing into the substance of each school and it was not always possible for principals and staff members to give so much of their time to external research projects, therefore pragmatic considerations had to be taken into account. Apart from the time constraints, the researcher also had to account for the fact that principals in general were not in favour of exposing themselves to the scrutiny of their staff members. To overcome the latter problem the researcher had to resort to convenient sampling procedures and selecting schools of which the principals had consented to participate in such an investigation. Five LPI and five Organisational Culture Questionnaires were distributed in those schools: one questionnaire to the principal and four to purposively selected staff members at the same school, who were able to participate in a sensible manner.

Questionnaires were received from all 30 schools involved. The LPI and the Organisational Culture Questionnaires were completed by 29 principals as well as by four subordinates from each of the 30 schools. Only one principal (school 4) refused to participate (in the latter case the average of the responses of the four staff members was calculated and used in the analysis). This exercise resulted in the return of 149 questionnaires to be analysed according to the various leadership practices (challenge the process, inspire a shared vision, enable others to act, model the way to subordinates and encourage the heart) and the schools' culture (sociability and solidarity).

Although the sample was relatively small in comparison to the population of principals in the Free State, which constitutes a principal body of 2 841 principals (RIEP, 2003:3), the purpose of this study was mainly to determine whether a correlation existed between the two variables, before the interrelatedness between possible subgroups would be probed in follow-up studies.

Analysis of data

Each school's data had to be analysed and kept together as it was necessary to determine what the correlation was between the particular organisational culture and the particular leadership practices.

The raw data obtained from the five questionnaires from each of the 30 schools in the Free State Province (only four from school 4) were used to calculate the mean scores and standard deviations for each of the leadership dimensions (Table 1), as well as for each of the organisational culture dimensions (Table 2). The mean scores for the five leadership dimensions were calculated out of 30, and the means of the organisational culture dimensions (sociability and solidarity) out of 20.

The arithmetic means on the respective leadership and cultural dimensions obtained from each school were entered into the STATA data processing program to compute the correlations (r) between the variables. Linear regressions and regression fit graphs were used to analyse the

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Table 1   Arithmetic means and standard deviations of the leadership practices of principals

School	Challenging the process		Inspiring a shared vision		Enabling others to act		Modelling the way		Encouraging the heart	
	$\overline{x}$	δ	$\overline{x}$	δ	$\overline{x}$	δ	$\overline{x}$	δ	$\overline{x}$	δ
1	9.0	0.547723	8.0	0.894427	8.2	0.734847	10.4	0.4	11.0	0.707107
2	22.2	0.583095	24.2	0.374166	22.0	1.140175	23.8	0.663325	23.0	0.707107
3	25.4	0.678233	25.0	1.048809	27.6	0.244949	25.8	0.374166	27.8	0.2
4	21.0	0.83666	22.2	0.489898	25.2	0.583095	23.4	0.812404	24.2	0.374166
5	21.8	0.583095	19.4	0.927362	19.0	1.516575	21.2	0.8	20.6	0.509902
6	19.2	0.860223	18.2	1.157584	20.0	0.707107	19.6	1.288410	18.4	0.678233
7	16.6	1.077033	17.4	0.067823	19.4	0.812404	18.0	1.140175	19.4	0.812404
8	18.2	0.8	16.2	0.734847	17.8	1.496663	19.2	0.374166	15.4	0.4
9	17.4	1.077033	18.2	0.860233	18.4	0.812404	16.2	1.029563	17.6	0.748331
10	23.4	0.871780	20.2	0.734847	22.4	0.509902	21.8	0.374166	21.4	0.87178
11	26.8	0.734847	24.2	0.734847	25.2	0.509902	27.2	0.374166	25.0	0.632456
12	27.2	0.583095	25.4	0.4	26.2	0.583095	25.6	0.509902	25.6	0.748331
13	14.6	1.029563	12.4	0.812404	13.6	0.583095	14.4	0.812404	13.4	0.678233
14	22.2	0.860233	19.4	0.927362	20.6	0.927362	21.6	0.812404	21.6	0.509902
15	24.2	0.663325	23.0	0.707107	23.6	0.509902	23.4	1.029563	24.6	0.509902
16	8.2	0.8	10.4	0.509902	11.4	0.812404	9.6	0.927362	10.6	1.077033
17	11.4	0.509902	12.4	1.077033	13.2	0.4	13.4	0.509902	12.8	1.019804
18	16.2	0.374166	15.4	0.678233	15.2	1.319091	17.2	0.374166	14.4	0.927362
19	26.6	0.678233	24.0	0.707107	25.8	1.019804	23.6	0.509902	26.2	0.583095
20	25.2	1.319091	23.2	1.113553	26.2	0.860233	24.6	0.748331	25.6	1.208305
21	8.6	1.363818	9.2	0.583095	8.2	0.489898	10.4	0.678233	12.4	1.029563
22	21.4	1.029563	23.6	1.029563	21.4	0.927362	22.4	0.812404	23.0	0.894427
23	25.4	1.077033	24.6	0.812404	25.2	0.969536	26.0	0.547723	26.4	0.678233
24	22.0	1.140175	22.0	0.707107	24.6	0.509902	22.8	0.374166	24.0	1.048809
25	20.6	1.208305	19.2	1.593738	19.8	0.489898	21.2	0.969536	20.0	0.83666
26	19.2	1.240967	18.2	0.969536	19.8	0.860233	19.6	0.748331	18.4	0.678233
27	22.0	1.140175	20.2	0.860233	22.4	1.029563	21.6	0.509902	21.4	0.927362
28	16.4	1.363818	17.4	0.509902	20.2	0.374166	18.0	1.048809	19.4	0.927362
29	18.2	1.067708	16.4	0.678233	17.4	0.678233	19.2	1.157584	15.4	1.363818
30	17.4	0.812404	18.2	0.969536	18.2	0.374166	11.8	0.374166	11.8	1.2

data obtained from the investigation. To indicate correlations, regressions were regarded as valuable instruments as they portrayed the relationship between variables (Montgomery, Ranger & Hubele ,2003:273), where *r* was calculated as follows:

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{\left[n\sum x^2 - \left(\sum x\right)^2\right]\left[n\sum y^2 - \left(\sum y^2\right)\right]}}$$

Scatter plots resulting from regression analyses visually illustrate the particular relationships.

The principals' leadership dimensions (sub-variables) were used as the independent variables in this study and the school culture dimensions (sub-variables) as dependent variables. The

Table 2 Arithmetic means and standard deviations of the sociability and solidarity dimensions of organisational culture dimensions

School	Sociability		Solidarity	
	$\overline{x}$	δ	$\overline{x}$	δ
1	9.8	0.734847	11.2	0.734847
2	13.4	1.28841	17.2	0.583095
3	13.6	0.812404	15.2	0.583095
4	15.2	1.067708	16.4	0.678233
5	15.4	0.748331	17.0	0.707107
6	16.2	0.583095	12.6	0.748331
7	16.8	0.583095	17.4	0.678233
8	12.4	0.927362	13.2	0.663325
9	12.8	0.489898	11.8	0.583095
10	15.2	0.374166	17.2	0.374166
11	19.4	0.244949	18.2	0.583095
12	17.4	0.4	19.2	0.374166
13	14.4	1.029563	11.2	0.583095
14	15.8	0.583095	17.2	0.860233
15	17.0	0.447214	17.6	0.509902
16	15.2	0.374166	9.4	0.812404
17	10.6	0.678233	11.3	0.583095
18	14.2	0.663325	15.6	0.509902
19	18.4	0.509902	17.8	0.734847
20	19.0	0	18.4	0.4
21	9.4	0.812404	9.2	0.969536
22	13.6	1.16619	16.6	0.748331
23	14.8	0.583095	15.4	0.812404
24	17.0	0.316228	15.6	0.509902
25	14.4	0.812404	17.0	0.547723
26	14.8	0.969536	12.6	1.3634818
27	15.4	1.029563	17.4	0.4
28	16.0	0.83666	17.2	0.364166
29	13.2	0.916515	12.8	0.583095
30	11.8	0.969536	18.2	0.374166

correlation between five leadership practices (challenging the process, inspiring a shared vision, enabling others to act, modelling the way and encouraging the heart) and culture's sub-variables (sociability and solidarity) had to be determined in order to test the hypothesis as revealed in the Tables 3 and 4.

Regression coefficients cannot be used to indicate definite causations as there are too many other variables that may play a role such as workplace conditions, as indicated by Day (1999:134). He indicated that elements such as workplace conditions can have a definite influence on school culture formation. Cooper and Schindler (2003:583) state that such correlation data are valuable for developing a probabilistic model, which implies that the items with positive values (in Tables 3 and 4) revealed a positive relationship between the particular leadership practice of the principal and either the sociability or solidarity dimension of the school's culture.

Table 3   The relationship between socialibility and the leadership practices of
               the principals

	Coefficient	δ	r^2
Challenging the process	0.2726	0.26301	0.0743
Inspiring a shared vision	0.6497**	0.30245	0.4221
Enabling others to act (empowerment)	0.5864**	0.27004	0.3438
Modelling the way	−0.0469	0.27645	0.0021
Encouraging the heart (motivation)	0.1213	0.23740	0.0147

    * Significant ($p = 0.05$) ($r \geq 0.31$)
   ** Significant ($p = 0.01$) ($r \geq 0.42$)

Table 4   The relationship between solidarity and the leadership practices of
               the principals

	Coefficient	δ	r^2
Challenging the process	0.4453**	0.2814	0.1982
Inspiring a shared vision	0.2775	0.3236	0.0770
Enabling others to act (empowerment)	0.0612	0.2889	0.0037
Modelling the way	0.3179*	0.2958	0.1010
Encouraging the heart (motivation)	0.3456*	0.2539	0.1194

    * Significant ($p = 0.05$) ($r \geq 0.31$)
   ** Significant ($p = 0.01$) ($r \geq 0.42$)

   The precision of the measurement of the relationship was indicated by the standard error:
the smaller the standard error, the higher the precision of the sample. The results revealed
standard errors of < 0.5, indicating a high precision value. The latter was supplemented by the
high reliability scores of the questionnaires (0.9908 and 0.8306) which provided a sound basis
for interpretation of the findings to follow.
   Scatter plots were essential for understanding the relationships between variables (Cooper
& Schindler, 2003:571) and therefore such graphs were drawn to visualise the correlations
between the variables. To be significant, a coefficient of correlation calculated for 30 pairs of
respondents (the 30 schools sampled for this investigation) the measures had to be 0.31 at the
0.05 level and 0.42 at the 0.01 level (Kerlinger, 2000:188). For the purposes of this study only
the significant correlations (indicated by * and ** in Tables 3 and 4) were viewed as they con-
firmed notable positive relationships.

Relationship between leadership practices and sociability
Strong relationships appeared to exist between the principal's behaviour regarding the inspi-
ration of a shared vision and his/her attempts to enable the staff to act and cultivation of the
sociable element in the school culture.

Inspiring a shared vision and sociability
The correlation coefficient of 0.6497 revealed a strong relationship (near to 1.00) with culti-
vating sociability in the school. In interpreting the findings, it had to be taken into account that
any positive correlation indicates a movement in the same direction and that the relationship

was not of a negative magnitude. The scatter plot in Figure 1 visualises such a relationship.

As depicted in Figure 1 a positive relationship existed between principals' attempts to inspire a shared vision among the staff to strive towards their goals and sociability. In order to establish a shared vision the principal had to be visionary, account for the feelings and enthusiasm of the staff and demonstrate the value of mutual interest and commitment to a common purpose. The last appeared to contribute to the establishment of a sociable spirit among the staff as it was a continuous form of relation and morale building.
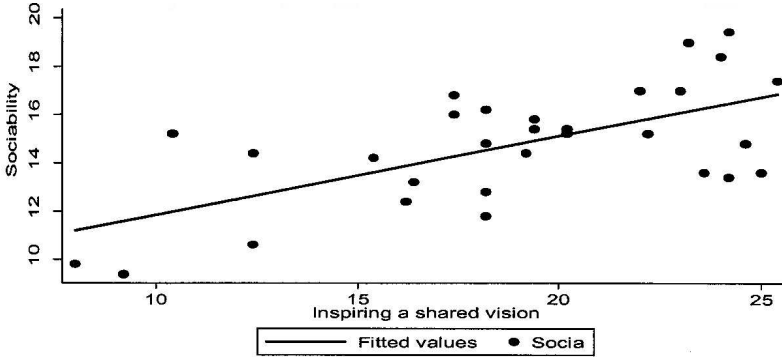
Figure 1 Inspiring a shared vision *vs* Sociability
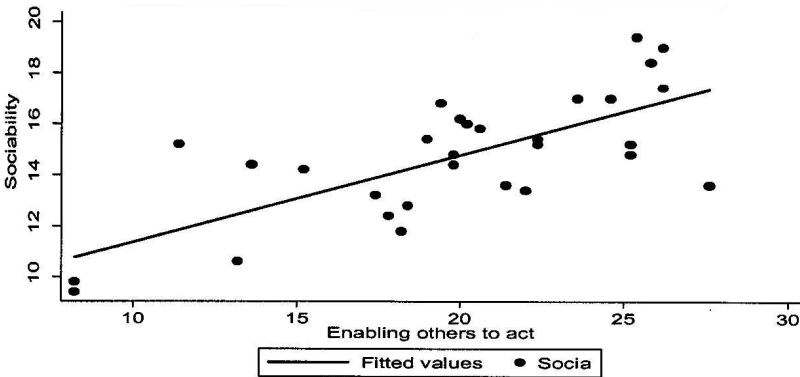
Figure 2 Enabling others to act *vs* Sociability

Enabling others to act and sociability

From Figure 2, it is clear that the correlation coefficient of the relationship between sociability and the principal's empowerment approach was fairly high (0.5864).The responses were

distributed close to the line suggesting a perfect relationship.

 This relationship between 'enabling others to act' and sociability was understandable as practices such as fostering collaboration, building relationships of mutual trust and making others feel important were all dimensions to strengthen sociability, such as the establishment of interpersonal relations, social interaction, teamwork, and a positive *esprit de corps*.

Relationship between leadership practices and solidarity
Challenging the process, modelling the way and encouraging the heart were significantly related to the dimension of solidarity that should exist in a school with a positive culture.

Challenging the process and solidarity
Although a correlation coefficient of 0.4453 did not depict a very strong relationship, the scatter plot depicts a definite pattern of interrelatedness between challenging the process and solidarity.

 Figure 3 visualises the degree of positive relationship between the learned behaviour of principals to challenge the *status quo* and creating a feeling of solidarity in the school. It may have been the fact that challenges require opportunities to change, innovative actions, risk tolerance and learning from mistakes that created a sense of belonging which stimulated unity in the organisation.
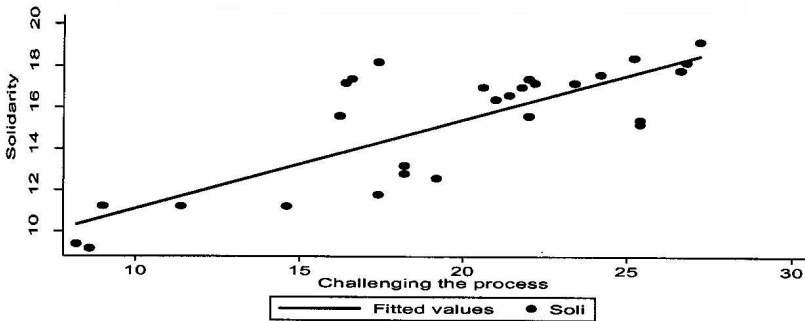

Figure 3 Challenging the process *vs* Solidarity

Modelling the way and solidarity
The relationship between the manner in which principals modelled the way and the staff members' feeling of solidarity was depicted in the correlation coefficient of 0.3179. Figure 4 portrays this relationship.

 Of the five items that showed a significant correlation to the two dimensions of organisational culture (sociability and solidarity), modelling the way had the lowest correlation coefficient. This is noticeable in the scatter plot in Figure 4, which reveals a large number of residuals (the plots that showed no discernible pattern).

 Because in this instance the LPI measured the principals' leadership with regard to transmitting the schools' values and beliefs, keeping projects on course, focusing on key

priorities and setting an example, it was clear why the dimension 'modelling the way' was related to the requirements of solidarity, such as ensuring mutual interests and pinning down shared goals that would benefit all involved parties.
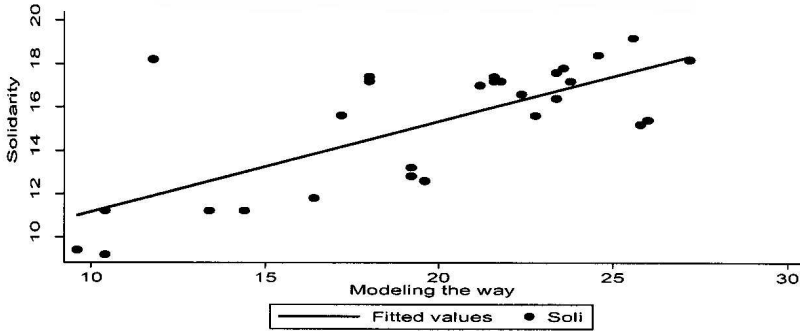

Figure 4   Modelling the way *vs* Solidarity

Encouraging the heart and solidarity

Encouraging the heart was significantly related to the creation of a sense of solidarity in the school, with a correlation coefficient of 0.3456. This relationship is portrayed in Figure 5.
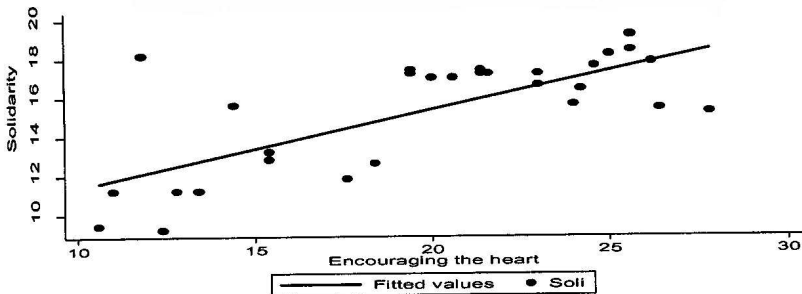

Figure 5   Encouraging the heart *vs* Solidarity

To encourage the heart of the staff members, the principal had to give recognition and encouragement in order to persist and pursue the school's vision. This showed a definite resemblance to achieving success and optimal performance and it was therefore understandable that these leadership practices showed a significant positive correlation to solidarity.

Conclusion

The relationship between the leadership practices of the principals and the existing organi-

sational culture in their schools was revealed by this investigation. The positive relationship between the principals' leadership practices and the sociability and solidarity dimensions of their school cultures emerged from this study. Although only three of the leadership practices were strongly related to the establishment of a sound school culture (0.01 level), the other leadership practices also contributed to the establishment of a positive school culture. Even these weaker related variables were significant and revealed a greater positive correlation, with either of the organisational culture dimensions, than a negative correlation. It was also found that each of the five leadership practices: challenging the process, inspiring a shared vision, enabling others to act, modelling the way and encouraging the heart, influenced the school culture and were in some way related to either sociability or to solidarity

These findings necessitated the rejection of the null hypothesis. Rejection of the null hypothesis implied that there was reasonable proof to believe there was a significant relation between some of the basic leadership practices of the principal and the establishment of the basic dimensions of a positive school culture that would probably be conducive to teaching and learning.

This last conclusion was supported by the initial indication that a school's culture forms a great deal of the staff's perceptions of their school and their commitment to their work. It was also indicated that an organisational culture was cultivated by management and, therefore, it would be a true asset to a school if a suitable principal could be appointed: a principal who leads in such a way that a culture, in which teaching and learning could thrive, is established.

Recommendations

From the results of the investigation, it was evident that principals should undergo a leadership assessment, in order to determine whether they practice the leadership dimensions implied by the LPI. For example:

- Setting a shared vision and mutual goals and gaining commitment towards them. It is therefore important that the principal is able to ensure that school projects remain on course, which could be done by striving towards small successes and celebrating even the smallest accomplishments;
- perceiving and approaching opportunities as challenges. This implies that principals must be visionary and innovative to approach changes positively, even if it may mean taking some risks;
- fostering collaboration by promoting co-operative goals and building trust;
- sharing a vision and showing others how mutual interests can be met through commitment and enthusiasm; and
- empowering their staff members to become competent in what they do and strengthening them by means of sharing information and power;

The above practices appear to have the strongest relationship with the cultivation of a sound organisational culture, but other aspects (as measured by the LPI) also need to be present in the leadership qualities of the principal, as they also have a significant influence on the organisational culture of the school. Such as

- knowing when to reward staff members for initiatives and work well done, and providing them with the necessary authority and confidence to execute their tasks effectively.
- leading by example by acting in accordance with the values, traditions and beliefs of the school, and by planning small wins that will promote consistent progress and build commitment; and
- providing the necessary support to the staff. The school must become a learning orga-

nisation in which the staff are assisted to persevere and eventually succeed.

However, the above leadership qualities may remain only an ideal if a school looks for all these characteristics in one person. This does not mean that there cannot be a continuous purposeful attempt at cultivating and developing behaviour of principals that will ensure the establishment of a school culture in which both sociability and solidarity thrive.

Closing remarks

Because of the relatively small sample, the hypothesis needs to be tested further and the tendencies revealed cannot be generalized. It is further recommended that the relationship between the leadership practices of principals and the prevailing school cultures be measured according to subgroups (such as race and gender) and followed up by a qualitative investigation to "get under the skin" (Duff, 1992:87) of this issue. If selection panels know what management practices to look for when appointing principals, they can make a major contribution to restoring the culture of teaching and learning and so investing in the future of education in South Africa.

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