

The role of the principal, teachers and students in restoring the culture of learning, teaching and service (COLT) in black secondary schools in the Pretoria region

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Political and social instability over many years has led to a crisis in the South African education system. One of the crucial changes and challenges that the new democracy faces is to reconstruct a society and an education system that will be able to establish a culture conducive to learning, teaching and services in schools (COLT). This article examines factors that have led to a loss of the culture of learning and teaching (COLT) in South African schools, and the characteristics of a positive culture expected by principals, teachers and students. Results indicate that although principals are attempting to influence this culture, there is little support for such changes from teachers and students.

Introduction: The crisis in South African schools

One of the crucial changes and challenges, that the post-apartheid South African democracy faces, is to reconstruct, against many odds, a society and an education system that will create excellent conditions for teaching and learning (Masitsa, 1995:111). Yet schools in South Africa, especially black¹ schools, are still characterised by poor Grade 12 results, high absenteeism, pupils being late for classes, and irregular attendance of classes by both teachers and students (Nxumalo, 1995: 55). The issue of the absence of 'a culture of learning, teaching and services' (COLT) in South African schools, especially in black secondary schools, is a major concern, to which Saunders (1996:18) aptly refers as "a crisis of gargantuan proportions". This lack of an appropriate environment is apparent in the low pass rate of the Grade 12 examination, the high drop-out rate, and the high percentage of students who must repeat a grade. As Tsedu (in Saunders, 1996:18) puts it:

"The crisis in black education has ... become something that no one takes very seriously anymore. As we drive around the townships and villages, we see children, either in school uniform or ordinary clothes, roaming the streets during school hours."

Political and social instability that existed in the country in the past has led to a crisis in the South African education system. This crisis was characterised by protest marches, strikes and boycotting of classes by students and teachers, who protested against the so-called Bantu Education system (Mashile & Mellet, 1996:223). Schools were viewed as political grounds where students held meetings to plan strikes, class boycotts and stay-aways. During this time, the students developed a negative attitude towards schooling and popular slogans such as "Liberation first and education later" (Dekker & Van Schalkwyk, 1995:457) became everyday fare. Due to the frequent disruptions in schools by students, the climate was not conducive to teaching; hence the teachers also lost their morale (Hartshorne, 1991:68).

During this political turmoil school buildings were burnt; furniture and equipment were destroyed and stolen by the students and by the community as a whole. In the meantime the students developed "an anti-academic attitude towards schooling" and they lost their dedication and willingness to learn (Kitchen, 1988:57). Teachers lost their

professional ethos because the climate in schools was not conducive to teaching and learning. Principals lost control of both teachers and students, and the principals were viewed by society as 'sell-outs', for their loyalty was torn between the Department of Education (DoE) and the community. They had to carry out the orders from the Department (e.g. the use of Afrikaans as a medium of instruction) in a hostile and rebellious climate.

Towards a new dispensation

The passing of the Bantu Education Act (1953) caused dissatisfaction amongst blacks. This led to the struggle and disturbing events that characterised the period between 1976 and 1980 (Behr, 1988:36). However, during the 1980s calls were made by leaders such as Mandela and Sizulu for pupils to return to schools, while their educational problems were being negotiated by community representatives and the authorities (Hartshorne, 1991:70). In support of this, according to Chisholm and Vally (1996:5), there has been much emphasis in South Africa since 1990 of the need to shift from "a culture of resistance" (due to the fact that before 1990, schools tended to be political battlefields) to "a culture of reconstruction and development".

All the stakeholders in education have to realise that the past culture of resistance has to go the way of the apartheid system. It is now time for the reconstruction and development of the culture of teaching and learning in South African schools. The culture of learning and teaching will be discussed in the next section.

A culture of learning and teaching (COLT)

A public debate regarding COLT characterises current discussions on education in South Africa. Nxumalo (1993:55-60) conducted a survey of student, parent and teacher perceptions of COLT in Kwa-Mashu schools. The study indicated that although everybody agrees that there has been an erosion of COLT, each of the three parties blames the other for the situation.

For many restoring a culture of learning and teaching means bringing the conditions and disciplines of compulsory schooling — regular attendance, punctuality and acceptance of authority — to bear on teachers and students. However, since the main aim of this research is to shed light on factors that would potentially contribute to restore, reconstruct and build a culture of learning and teaching, it is crucial to highlight the broader principal aims of COLT here:

- To foster creative, critical and independent thinkers with skills and competences that are transferable.
- To foster attitudes and values that are compatible with the ongoing transformation of society.
- To promote values of critical thinking, self-discipline, empowerment, respect for the dignity of others, and a commitment to lifelong learning.
- To develop new social relationships in schools founded on new forms of discipline, commitment and accountability of all stakeholders in education (Chisholm & Vally, 1996:1).

The presence of COLT can be also identified by a more obvious and public measure, such as the matriculation examination results. They are appalling. From the 1976 Soweto uprising up to 2000, six years after the democratic elections, the pass rate at matric level has deteriorated dismally. This state of affairs is one of the many indi-

¹ Although the authors realise that classification by ethnic group is an artificial way of distinguishing between people, they nonetheless deem it necessary to point out meaningful implications of inequalities and differences along these lines.

cations that a culture of learning and teaching does not exist in our country. According to Chisholm and Vally (1996:2-3), as far as teachers are concerned, COLT refers to their professionalism and motivation to teach, which is depicted in their punctuality, regular school attendance, lesson preparation, being disciplined and as role models, ability to discipline learners and having a healthy relationship with the principal, learners, parents, and the wider community.

The Reconstruction and Development Programme (RDP) has introduced a new dimension to COLT, which focuses on rebuilding the material, and social conditions necessary for schooling to take place (Chisholm & Vally, 1996:3). This has resulted in the renovation of school buildings and the provision of the necessary facilities and infrastructure such as electricity, water, libraries and science laboratories to selected schools. This is the so-called 'services' part of the COLT campaign. There is also the capacity building of governing bodies whereby the school management team, parents, teachers and learners are given a chance to contribute to school related matters.

Attention will now be focused on a number of factors that have a negative impact on COLT in South African schools, particularly in the Pretoria region.

Factors that have a negative influence on the learning environment

Students lack motivation to learn, ability to concentrate in class, language skills, self-discipline, and punctuality. There is dodging of classes, use of drugs and weapons, alcohol abuse, and cheating during tests and examinations (Smith & Schalekamp, 1997:4-8). Many students have non-supportive homes, little parental care and involvement, few resources in the homes, little intellectual stimulation, and illiterate parents (Mnisi & Shilubane, 1998:6; Smith & Schalekamp, 1997:4). The school environment lacks discipline, respect for teachers, proper role models within the school and society at large; the infrastructure is poor, classrooms are overcrowded, and teacher to pupil ratios are high (Masitsa, 1995:21).

There is a lack of professionalism among teachers and principals, poor management of the school by the principal, and lack of preparation for lessons by under-qualified teachers (Smith & Schalekamp, 1997:23). Dean (1993:151) points out that being a successful principal depends very largely on relationships with teachers, sound relationships and effective communication in our schools.

Factors concerning the DoE that have a negative influence on the learning environment include inefficiency and lack of funding in the Department to rebuild schools, renovate buildings, supply books in time, and supply teaching aids and materials. Another problem is that principals find it difficult to implement certain policies outlined by the department, or the policies are implemented and not monitored to see if they have been successful (Heystek, 1999:56).

Problem statement

With this scenario as background, the following research question will serve as the primary research question guiding this research:

What is the role of principals, teachers and students in restoring COLT in black secondary schools in the Pretoria region?

The following questions will receive attention:

- What are the reasons for the loss of COLT in schools?
- In which ways can the principal, teachers and students ensure a positive COLT in schools?
- How can the school principal, the DoE, teachers, students, parents and the wider community contribute to ensure that the culture of teaching and learning is restored and maintained in South African schools (particularly in the Pretoria region)?

Aims of the research

The current research was undertaken to determine the negative cultural factors in the schools and the role of the principals, teachers and students in the process of restoring an appropriate learning environment. The overriding aim of the research was to determine how all the

stakeholders in education, especially principals, can help with the restoration of a pro-educational culture. The aims of this study can therefore be summarised as follows:

- To indicate some of the negative factors related to principals, teachers and students that have led to a loss of COLT.
- To indicate the state of affairs in schools related to the roles of principals, teachers and students in the process of restoring COLT.
- To assist the stakeholders, especially principals, in education in gaining insight into ways of restoring the lost COLT.
- To make teachers, principals and students realise that, before blaming someone else for the lack of COLT, it is advisable to assess oneself first. (This proved to be the most popular exercise as all the respondents found it worthwhile during both the pilot study and the research proper.)

Ethical aspects

Permission was requested and obtained in writing from the DoE to conduct the research and to publish the research findings. Assurance was given that no individual would be identified.

Limitations of the study

This was a limited, local study, and the findings reported in this article have limited generalisation value; they do, however, have naturalistic generalisation value. Furthermore, the study was limited to principals, teachers and students, whilst it is clear that there are other significant stakeholders too. Lastly, due to financial constraints, the study was carried out in the Pretoria area only.

Research design

Two complementary approaches, qualitative and quantitative, were implemented. The research reported here was not a quantitative comparative study conducted with two groups of subjects, but an action research study over an extended period of time with participants in traditionally black schools. The qualitative research will be discussed first.

Qualitative aspects of the current research

Observation and interviews

During the visits to all the schools observation and interviews were conducted to assess the attitude of teachers, students, and principals with respect to education and the restoration of COLT. This comprised the qualitative part of the study.

Report on the informal interviews

In each of the 30 schools visited within the Pretoria area the researchers managed to have a conversation with the principal or deputy principal when the principal was not available. Teachers and learners were also interviewed.

Principals' opinions on COLT in their schools

In some schools the DoE had already formally introduced COLT, whereas in others the principals had only heard about it — the DoE has not yet started implementing it formally. Some principals mentioned the DoE's so-called LINK and EQUIP programmes as part of those programmes that are restoring facilities and buildings in schools to improve COLT. However, the overall feeling of almost all principals is that although the DoE is capable of making statements, plans and promises, these never seem to be implemented or monitored to ensure their success.

Secondly, principals experience problems with their teachers and learners in schools. They feel that these two parties are not motivated to do their respective duties. Firstly, teachers are unwilling to help principals with the disciplinary problems of learners. They tell principals that the government has disempowered them. Principals have expressed their concern and suggest that the government should empower teachers in some ways, e.g. by allowing them to discipline

learners (punish them).

Thirdly, principals complain that they have far too many roles to play in schools, including emergency meetings with the DoE. Therefore, as managers and teachers, their teaching roles suffer a great deal, management duties become too demanding. They have little time to discuss teaching and learning matters with both teachers and learners, and matriculation examination results keep on deteriorating in most schools.

Lastly, principals entreat the DoE to employ more people to monitor the restoration of COLT in schools and the implementation of positive COLT measures, e.g. registers for learners and teachers.

Teachers' opinions about COLT in their schools

Most teachers sympathise with their principals whom they think are overworked by the DoE. A variety of duties and responsibilities are vested in the principals, and as the principals are occupied with management duties, teachers take advantage because principals are unaware that they do not teach when they should. Teachers agree that they have lost their professional ethos. Their dedication and motivation to do their work efficiently is zero percent. Hence teachers have lost control of the learners because they are irresponsible adults who are never punctual, who dodge classes, who are not dedicated to their work and lack professionalism. Teachers blame the DoE for not increasing their salaries in order to motivate them.

However, teachers agree that they are the pivotal points of a school. The teachers' willingness to work hard can ease the principal's job and also help to control learners within the school. Teachers are the ones who do the actual teaching, who can help to solve punctuality, truancy and disciplinary problems. If teachers are teaching from eight o'clock until one/two o'clock, all learners will know that they also have to be at school in time to be taught and to learn. One teacher said "committed teachers make committed learners or *vice versa*".

Teachers have the following complaints and negative criticisms to make:

- It is a waste of time that we can use for revision.
- Who is going to mark those scripts and when? It is the DoE strategy to overwork poor matric teachers.
- The DoE promised to send people to moderate these question papers to ensure that they are on matric level, but such people never came. (This is especially the case in the Soshanguve area).
- Most examinations start late, as question papers are not delivered on time in schools.
- The level of questions asked is below matric standards, thus giving a false picture to the learners.

Furthermore, most teachers complain that the DoE, the Gauteng MEC and the Minister of Education have made impressive speeches and promises that are never fulfilled. These teachers say that they have heard about COLT on the radio, they have read about COLT in newspapers and magazines, but nothing has been done in their respective schools. They complain about the poor facilities and infrastructure in their schools, overcrowded classrooms, poorly equipped laboratories and non-existent libraries. The teachers say that each year the DoE promises to deliver textbooks and other materials to be used for teaching in time, but this never happens. The textbooks are delivered late or not at all.

It seems as if the DoE has lost its credibility as far as teachers are concerned. This situation is likely to hamper progress and the implementation of new policies in schools, for teachers are inclined to think that the DoE will always make empty promises. This in turn weakens the teachers' willingness and dedication to teach and follow the DoE's policies.

Learners' opinions about COLT in their schools

Most learners do not know about COLT at all, some have heard about it while others have only seen this acronym written somewhere but do not know what it means. In some schools, the learners are happy that

the buildings are being renovated while some technical schools have more equipment and computers donated to their schools. However, learners do not know that it is the RDP's attempt to restore COLT in schools.

However, learners express serious concern about teachers. One learner regretted to say that if teachers from their neighbouring school, which produced good and desirable results, could come and teach them, their school would be better.

Lastly, all learners like and are in favour of the mock examinations for matriculants. They say it is a good practice, especially because some schools never had such practise before. Teachers do not teach matriculants after the June vacation, they give them old question papers, while they attend to their personal and private matters at the expense of the learners. Learners agree that they are lazy, dodge classes and are ill-disciplined. They blame it all on the teachers and in some cases parents. They urge and beg teachers, principals and parents to lead them and show them the right way. On the whole, schools need to introduce a culture of success. Successful schools have a positive attitude towards teaching and learning; everybody in the school hopes for a brighter future.

Report on the observational studies

The Pretoria area is divided into four districts, that is N1, N2, N3 and N4. Some kinds of behaviour are typical in some areas. For instance, in all the Atteridgeville areas that the researchers visited, the gates are locked during classes and only opened during break periods (some Mamelodi schools and Soshanguve schools do not lock their gates, though). When the researchers asked about the logic behind this practice, the following reasons were given:

- To provide safety to the people and property within the school. During this research outsiders on the school premises killed two learners;
- To ensure punctuality of both teachers and learners;
- To ensure that no trespassers enter into the school grounds uninvited; and
- To hinder dodging of classes by learners and teachers. All these learners who dodge classes can easily be found within the school premises.

Those learners who want to go out of the school grounds have to produce written permission from teachers, whereas teachers have to produce written permission to the security guard at the gate. The researchers were always escorted to the principal's office and asked to produce the student card as a form of identification. Safety seems to be a priority in all schools.

Secondly, learners in most schools wait outside their classrooms when their teachers do not come to classes. Atteridgeville schools do not have the same problem and it looks as if discipline is not much of a problem in this area. Teachers are not always punctual; they arrive at classes 5–20 minutes late, especially in Mamelodi and Soshanguve. According to the researchers' observation, in all the schools visited the following aspects deserve attention:

- Punctuality and discipline of teachers and learners;
- Safety of the people and property within the schools' premises; and
- All visitors, like the researchers, have to report to the principal's office and provide identification before conducting their business.

All these factors will contribute to the positive restoration of COLT in schools, because safety, discipline, punctuality and dedication provide a climate conducive to teaching and learning. This in return can help enhance COLT in a school that will be reflected by good matric results and the success of all learners.

Attention will now be paid to an explanation of the quantitative part of the research design.

The quantitative aspect of the research

Pilot study

A questionnaire was developed and refined by means of a pilot study.

Twenty teachers were selected for the pilot study. Testees were requested to circle the numbers of the items they did not understand, and to underline phrases and words that were either unclear or unintelligible. After receiving all the completed pilot research questionnaires, the researchers reviewed the responses for clarity and distribution without running an item analysis. Minor linguistic mistakes were discovered, such as sentence construction and spelling errors. Such errors were corrected and returned for another round of response. After receiving these responses, the questionnaires were regarded as usable.

Subjects

In the current study the literature review revealed that in South Africa black schools in particular have lost their COLT. They are the ones whose learners perform poorly in matric examinations as very few black matriculants gain university/technikon exemption. Most black schools are disadvantaged in terms of facilities, infrastructure and resources (Hartshorne, 1991; Nxumalo, 1995; Smith & Schalekamp, 1997). Hence, for the purposes of the study and its aims only black schools were used in this research.

Purposive sampling was used whereby only black schools were chosen for the purpose of this research (Bailey, 1987:94). The criteria that were used to draw the sample were that the schools had to be in Gauteng, they had to have a majority of black learners and they had to be public schools. The questionnaire was administered to 30 principals, 90 teachers and 180 students in 30 schools in the Pretoria Area. A list of schools in all four districts was obtained; schools with predominantly black students (previously only black schools) were identified and selected. Eight schools were taken from the N2 and N3 districts, while seven schools were selected from the N1 and N4 districts.

Questionnaire

One questionnaire (in English) was designed as a means of obtaining the research data. The questionnaire statements were based on the content of an extensive literature survey conducted by Lethoko (1999: 20-103). Lethoko established relevant negative factors, and defined the role that stakeholders in education can play. The following positive factors were identified: punctuality; regular attendance of classes; dedication to one's work; sound teacher-student relationships; overall motivation to perform well at school/work; parental support; discipline; facilities in a school; state of buildings and infrastructure; and resources, e.g., teaching media.

A questionnaire was developed to identify the perceptions of principals, teachers and students regarding the responsibility for COLT and its enhancement. A five-point Likert-scale was used to rate positive characteristics as they exist in schools. Teachers, principals and students completed the same questionnaire. The rationale for doing this was that at the end of every year when Grade 12 results are announced, principals tend to blame teachers for low pass rates, teachers blame students for not studying, and students blame principals for poor management and teachers for not teaching.

There were two sections in the questionnaire. In the first section the principals, teachers and students had to rate themselves with regard to the characteristics that enhance or promote COLT. In the second section, the respondents rated one another with regard to the characteristics which enhance or promote COLT, including principals assessing students and teachers; teachers assessing teachers and principals; and students assessing principals and teachers. The questionnaire also had sections where respondents selected the person most responsible for the COLT. They also had to indicate the state of the infrastructure, and make recommendations for achieving COLT in schools.

Due to the nature of the items, item and factor analyses were not carried out; neither were reliability coefficients calculated.

Statement of hypotheses

The null and alternative hypotheses, that were to be investigated by this study, were the following:

H₀1: There is no preference among stakeholders regarding who is most responsible for COLT

$$(\pi_{\text{Principals}} = \pi_{\text{Teachers}} = \pi_{\text{Learners}} = \pi_{\text{All persons involved}} = \pi_{\text{Parents}} = \pi_{\text{Heads of Department}} = \pi_{\text{Deputy principals}})$$

H_a1: There are preferences among stakeholders regarding who is most responsible for COLT

$$(\pi_{\text{Principals}} \neq \pi_{\text{Teachers}} \neq \pi_{\text{Learners}} \neq \pi_{\text{All persons involved}} \neq \pi_{\text{Parents}} \neq \pi_{\text{Heads of Department}} \neq \pi_{\text{Deputy principals}})$$

H₀2: There is no difference in rating in regard to 'satisfactory'² rating between groups

$$(\pi_{\text{Principals}} = \pi_{\text{Teachers}} = \pi_{\text{Learners}})$$

H_a2: There are differences in rating in regard to 'satisfactory' rating between groups

$$(\pi_{\text{Principals}} \neq \pi_{\text{Teachers}} \neq \pi_{\text{Learners}})$$

Analytical procedures

Frequencies, the Friedman test and the Sign test (non-parametric statistics) were used to analyse the data. In the current research preferences regarding who is most responsible for COLT and differences in rating were regarded as statistically significant at the 1% level of confidence.

In the following section the results of the empirical research project will be highlighted with the aim of indicating the state of affairs in the schools and to search for possible solutions to improve COLT.

Results

The overall responses (frequencies) to the principals' characteristics of COLT appear in Table 1.

The results of a Friedman two-way analysis of variance test (multiple comparisons) for comparing COLT responsibilities for different stakeholders appear in Table 2.

From Table 2, it is clear that H₀1 (there is no preference among stakeholders regarding who is most responsible for COLT ($\pi_{\text{Principals}} = \pi_{\text{Teachers}} = \pi_{\text{Learners}} = \pi_{\text{All persons involved}} = \pi_{\text{Parents}} = \pi_{\text{Heads of Department}} = \pi_{\text{Deputy principals}}$) is rejected in favour of H_a1 (there are preferences among stakeholders regarding who is most responsible for COLT

$$(\pi_{\text{Principals}} \neq \pi_{\text{Teachers}} \neq \pi_{\text{Learners}} \neq \pi_{\text{All persons involved}} \neq \pi_{\text{Parents}} \neq \pi_{\text{Heads of Department}} \neq \pi_{\text{Deputy principals}}).$$

In Table 3, the rankings of principals, teachers and students with respect to the characteristics of COLT were compared by using the Friedman two-way analysis of variance test (multiple comparisons). (As previously indicated, only *satisfactory* ratings were compared.)

From Table 3, it is clear that H₀2 (there is no difference in rating among groups in regard to 'satisfactory' rating ($\pi_{\text{Principals}} = \pi_{\text{Teachers}} = \pi_{\text{Learners}}$) is rejected in favour of H_a2 (there are differences in rating between groups in regard to 'satisfactory' rating ($\pi_{\text{Principals}} \neq \pi_{\text{Teachers}} \neq \pi_{\text{Learners}}$).

Respondents' rating of the state of facilities, buildings and resources is supplied in Table 4.

Discussion

Characteristics of the principal in regard to COLT

The questionnaire's focus was the positive characteristics of principals, teachers and students. Table 1 indicates that principals are seen as committed to their work. Of the respondents 286 (95.3%) are satisfied with the principals' motivation. This is very promising because a motivated principal is likely to be able to motivate teachers and students. But there may be a question about the ability of the prin-

² *Highly satisfactory* and *satisfactory* options on the Likert scale were combined to form one response category (*satisfactory*) and analyses were then based on respondents' ratings of characteristics as *satisfactory*.

Table 1 Ratings by principals, teachers, and students of principals' characteristics and work towards positive learning environment

Characteristics	Respon- dents	Satis- factory ³	Uncer- tain	Unsatis- factory	Total
Punctuality	n	229	44	26	299
Dedication to do their work	n	256	21	23	300
Care of relationships in the school	n	216	43	41	300
Co-operation with parents	n	270	22	8	300
Overall motiva- tion to perform their duties	n	286	7	7	300
Discipline and self-discipline	n	266	23	11	300

Table 2 Results of Friedman test for comparing COLT responsibilities for different stakeholders (n = 298)

Stakeholder	n	% indicated by respondents
Principals	131	43.95 * a +
Teachers	47	15.77 * b
Students	38	12.75 * b
Total	26	8.72 * b
Parents	21	7.05 * b
Heads of Department	20	6.72 * b
Deputy Principals	15	5.04 * b
Total	298	100.00

* : $p = 0.0000$

+ : Percentages with different symbols are significantly different

principals to motivate the teachers because only 66% of the respondents indicated that the teachers are satisfactorily motivated to do their duties. One of the important jobs of principals is to motivate the teachers. Moon and Mayes (1994:361) stress the fact that motivation has long been accepted as a powerful determinant of what happens in classrooms. It is suggested that teachers will only be able to motivate themselves a certain amount and then they need somebody to motivate them to higher levels of achievement.

The second highest rated characteristic of principals was co-operation with parents, with 90.0% of the respondents that are satisfied with the way in which principals co-operate and involve parents in the issues that concern their children's education. This characteristic is one of the most important ones because the South African Schools Act (Department of Education, 1996) requires parents to be members of the governing body of every school. This positive indication is not echoed by observation of involvement of parents in school activities. Parents are especially not involved in learners' academic work (Heystek & Louw, 1999:25).

The third highest rated characteristic is the principals' discipline and self-discipline. As a leader and the key figure in the school the principal must be able to discipline both teachers and students. It will be easier for students, parents and teachers to respect such a principal, listen to him, and obey orders. Of the respondents 266 (88.7%) were satisfied with their principals' discipline, 23 (7.7%) were uncertain and

Table 3 Ranking of principals, teachers and students with respect to the characteristics of COLT (compared by using the Friedman test) (comparing 'satisfactory' ratings) (n = 297)

Characteristics	Percentage indicated by respondents			P
	Principals	Teachers	Students	
Punctuality	76.8 a +	64.0 a	40.7 b	0.0000
Regular attendance of class ++		64.6 b	37.3 c	0.0001
Dedication to their work	85.2 a	65.9 b	39.7 c	0.0000
Relationships in the school	72.0 a	63.2 ab	56.2 b	0.0154
Co-operation with parents	90.0 a	62.0 b	45.8 c	0.0000
Overall motivation	95.3 a	61.7 b	46.3 c	0.0000
Discipline and self-discipline	88.5 a	59.8 b	34.5 c	0.0000

+ : Groups with common characters are not significantly different (comparisons to be made row-wise)

++ : Comparisons made using the Sign test

Table 4 Rating regarding the state of facilities, buildings and resources

	Satisfactory		Uncertain		Unsatisfactory		Total
	n	%	n	%	n	%	
Facilities, e.g. water, electricity, sports fields, grounds, desks	147	48.0	33	12.0	120	40.0	300
Buildings, e.g. toilets, libraries, halls, laboratories	97	32.4	35	11.7	167	55.9	299
Resources, e.g. textbooks, teaching aids, laboratory equipment	86	28.7	44	64.0	150	56.7	280

11 respondents (3.7%) are dissatisfied with the principals' discipline and self-discipline. Principals with low discipline will probably not be respected and it may not be easy for the principal to control the staff and students.

COLT embodies a positive attitude and the dedication of everyone involved to perform his or her duties efficiently. Of the respondents 256 (85.3%) are satisfied, 21 (7.0%) are uncertain, while 23 (7.7%) are unsatisfied with the principals' dedication. This implies that the principal as the head of the school shows a lot of interest in and a positive attitude towards work. This could influence the teachers and students to do the same.

The ratings of principals' punctuality is rather disappointing, for if he/she is late for school, who will see to it that students are in class and teachers go to classes to teach at the right time? Of the respondents 229 (76.6%) are satisfied with their principals' punctuality. The lower rating of punctuality places some doubt on the motivation of the principal. The low ratings of punctuality of teachers (63%) and students (40%) will certainly have a negative effect on the learning and teaching in schools.

Lastly, principals are rated low on caring for relationships in the schools. Poor and disharmonious relationships hinder the teaching and learning process for they result in poor co-operation between the parties involved. Of the respondents only 216 (72.0%) are satisfied with this issue. This characteristic needs to be given the special attention it deserves.

The questionnaire also asked who is most responsible for COLT. Of the respondents, 131 rated principals as having the major responsibility for the restoration of COLT. Responses indicate that subjects

³ Although the questionnaire uses a five-point scale to determine the attitude of the respondents (principals, teachers and students) towards characteristics of COLT, for the purposes of the analysis the "Highly satisfactory" and "Satisfactory" options are combined to form a "Satisfactory" response. Likewise, the "Highly unsatisfactory" and "Unsatisfactory" responses are combined to form an "Unsatisfactory" response.

hold the other stakeholders much less responsible. However, it is clear that a joint effort of all role players will have greater benefit. Ideally all persons involved must share the responsibility for the restoration of COLT.

The role of principals, teachers, and students to restore COLT
From Table 3 it is clear that statistically significant differences were found between the three groups' ratings regarding all characteristics. It is also clear that the students, followed by teachers, are perceived to be most responsible to the current insufficient COLT in South African schools. Hartshorne (1990:73) refers to this phenomenon as indicative of "a creeping deterioration of the learning environment and the collapse of teacher morale". According to Table 3 principals have the highest percentages in all the given characteristics of COLT. The principals are supposed to have a positive influence on COLT. However, their punctuality, which is 76.8%, including their care for relationships in the school (72.0%), needs further attention. The teachers' overall motivation is 61.8%, while that of students is 46.3%. The fact that these percentages are low probably influences to a certain extent regular attendance of classes, dedication to duties, and discipline. Principals need to motivate teachers and students to change their attitudes towards schooling — they have to come to school early, be well prepared, dedicated and show signs of being disciplined.

Furthermore, principals also have to pay special attention to relationships among teachers and among students. Disharmonious relationships can impede progress in a school and result in the loss of dedication, discipline, and motivation in both teachers and students. For instance, if teachers do not relate well with one another, they cannot help one another professionally; if a teacher has a useful teaching medium and the others are not given the chance to use it. This was one of the problems encountered during the empirical research. One teacher refused to complete the questionnaire because his 'enemy' had completed one. Relationships are also important for students. During the interviews students in one school commented on the 'love affairs' that teachers have with students. They say those students always pass the tests and internal examinations, but fail at the end of the year. This practise ruins such students' future. Students also need to help one another in order to succeed. Group discussions, debates, and drama help students to succeed in their studies. However, these activities are only possible if the relationships amongst the students are healthy and harmonious. The principal must take the lead to establish good relationships in the school.

Students' discipline and self-discipline are the worst (34.5%) of all the factors. This percentage is especially worrying, when Cullingford's (1988:3) idea that "the school presents itself as an autonomous organisation in which rules are an essential ingredient and obedience one of the cardinal virtues" is taken into account. A school cannot function effectively without clear disciplinary measures and orderliness imposed by principals and teachers. No effective teaching and learning can take place in such a school and this leads to a loss or lack of COLT.

Parental involvement, support and co-operation are also essential to restore COLT. Principals seem to relate well with parents; they have to assist students and teachers to achieve the same high standards. Parental co-operation, as one of the recommendations in this study, received the highest percentages from principals, teachers and students. This implies that this aspect is very important in the restoration of COLT.

The information in Table 3 should be read in conjunction with the responses of the teachers and students during the interviews and observations. They agree that most principals are overworked and that they are trying very hard to make their respective schools successful in an attempt to restore COLT. The most important issue here is that principals cannot restore COLT alone. They need the help, assistance and participation of teachers, students, parents, the DoE, and the community as a whole. Finally, it can probably be concluded that if teachers improve in terms of these characteristics, then students will probably

follow suit and it may become easier for the teachers to work with the students.

Facilities and infrastructure

According to Chisholm and Vally (1996:10), the Reconstruction and Development Programme focuses on the "services" part of COLT. They state that it is the responsibility of the state, through the DoE, to manage "the state, condition and availability of facilities, buildings, surroundings, resources and equipment in a school". People are more likely to value new, good-looking, and properly maintained facilities and infrastructure. Facilities that are well cared for tend to motivate teachers to do their work more effectively and students to learn better (Chisholm & Vally, 1996:14; Hartshorne, 1991:71). This attitude and motivation can help to restore COLT. Although this is the general belief, there is evidence that good facilities are not a prerequisite for COLT and good examination results (Lethoko, 1999). The most important factors are the attitudes and motivation of the teachers and students. Fully motivated teachers and students are much more likely to utilise the facilities and infrastructure optimally. This will be reflected by the improved pass rates in schools. Table 4 gives the results of the research done in 30 schools with regard to their facilities, buildings and resources. None of the facilities or infrastructure is satisfactory at all. The state or the DoEs are not able to meet the needs of the schools. Limited financial resources are the most important reason for this situation. This implies that the principals, teachers, students, and parents have to devise means to help the state to provide some of the necessary materials. Fund-raising campaigns, marketing a school and the involvement of parents (e.g. to fix a roof instead of hiring professionals) can help to raise and conserve school funds.

Conclusion and recommendations

The qualitative part of the research provided support for the findings from the quantitative part. The researchers were able to determine if everybody in the school was being exposed to COLT, i.e. principals, teachers and learners. It also became evident that parental involvement in school-related matters such as disciplining of learning was an indispensable factor. The DoE also has to work hard to rebuild the teachers' confidence and trust in it. Then teachers and the DoE can work together to make the COLT work and bear positive fruits for everyone. Again, the DoE has to monitor the progress and the strong and weak points of policies and improvements it wishes to make in the education system, so that pitfalls, misunderstandings and shortcomings can be identified as early as possible. It is really surprising to learn that some teachers are not aware of the use of teacher registers in schools as part of the COLT campaign.

Of the principals who were respondents, 16 (53.3%) have management training, whilst 14 (46.7%) do not. However, these principals, with or without management training, show signs of positive characteristics to improve COLT. The low percentage of management training for principals may be a reason why the principals are motivated and they try their best, but they do not obtain the expected results. Management training should perhaps be a prerequisite for principals. Teachers need to realise the importance of their dedication and excellent performance in enhancing the success of their schools and the achievement of COLT. It would appear that the overriding perception is that the attitudes of teachers and students need improvement. The facilities, buildings and resources are not up to the required standard, but it seems that this is not the most important factor to improve COLT.

The prevailing perception amongst principals, teachers and students is that the negative characteristics displayed by students pose the biggest stumbling block regarding the restoration of COLT in South African schools. Possibly, students' negative attitude may be partly the result of the negative influence from teachers and principals.

Finally, the following recommendations are made:

- A joint effort by the DoE, principals, teachers, parents, students and the community is essential to tackle the problem in hand.

- Parental involvement needs to be encouraged by principals, teachers and students.
- The professional conduct of teachers and students has to be reinforced and teachers should know their responsibilities.
- The principals must encourage teachers, parents and students to work hard so that the COLT slogan, which says, "Teachers teach, students learn and parents co-operate", can become a reality (Lethoko, 1999:157).

Finally: it is hoped that this article will contribute, albeit in a very small way, to the prevention of what Saunders (1996:19) refers to as "one lost generation after another". As Chisholm and Vally (1996:5) so aptly state: South African schools will simply have to shift from "a culture of resistance" to "a culture of reconstruction and development".

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References

- Bailey KD 1987. *The practice of social research*. Belmont, California: Wadsworth.
- Behr AL 1988. *Education in South Africa. Origins, issues and trends 1652-1988*. Pretoria: Academica.
- Chisholm L & Vally S 1996. *Report of the committee on the culture of teaching and learning*. Gauteng: Ministry of Education.
- Cullingford C 1988. School rules and children's attitudes towards discipline. *Educational Research*, 30:3-8.
- Dean J 1993. *Managing the secondary school*. London: TJ Press.
- Dekker E & Van Schalkwyk OJ (eds) 1995. *Modern education systems*. Durban: Butterworth.

- Hartshorne K 1990. Look back in anger. *Indicator SA*, 7:71-74.
- Hartshorne K 1991. Back to the future: African Grade 12 results 1989-1990. *Indicator SA*, 8:67-72.
- Heystek J 1999. In-service training for school managers in disadvantaged areas. Research project. Pretoria, SA: University of Pretoria.
- Heystek J & Louw E 1999. Parents as partners in schools — so important but why so inefficient? *South African Journal of Education*, 19:21-27.
- Kitchen H (ed.) 1988. *The Washington papers: South Africa in a transition to what?* Washington, DC: Praeger.
- Lethoko MX 1999. Restoring the culture of learning and teaching in secondary schools in the Pretoria area. Unpublished MEd dissertation, University of Pretoria, Pretoria.
- Lukhwarieni MH 1995. The issue of roles for the school management team revisited: a challenge to the democratic education system. Unpublished MEd dissertation. Pretoria: University of Pretoria.
- Mashile EO & Mellet SM 1996. Political and social factors related to secondary pupils' attitude towards school. *South African Journal of Education*, 16:223-226.
- Masitsa MG 1995. The establishment of a learning culture as a prerequisite for academic achievement. Unpublished DEd thesis, University of South Africa, Pretoria.
- Mnisi N & Shilubane M 1998. From the spectator to an active participant: a joint effort towards the development of a culture of teaching and learning (Unpublished paper).
- Monyoo LA 1998. Transforming the culture of learning and teaching: a South African perspective. Paper presented at the *Annual Conference of EASA*, Broederstroom, South Africa, 21-23 January.
- Moon B & Mayes AS 1994. *Teaching and learning in the secondary school*. London: The Open University Press.
- Nxumalo B 1995. The culture of learning: a survey of Kwa-Mashu schools. *Indicator SA*, 10:55-60.
- Republic of South Africa 1996. *South African Schools Act*. Pretoria: Government Printers.
- Saunders W 1996. One lost generation after another. *Frontiers for Freedom*, 18-19.
- Smith DPJ & Schalekamp S 1997. Restoring a culture of teaching and learning: Results of a phase one project in the West Rand Department of Education. Paper presented at the *EASA Conference*, Johannesburg, 1-13.

Concept formulation for environmental literacy

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Various studies have shown a lack of understanding of environmental concepts amongst individuals of all ages. Teachers can play a substantial role in uplifting the level of environmental literacy of the population. There is, however, concern whether teachers do actually have the necessary basic knowledge of environmental concepts which they have to teach. In this article we address the concepts which relate to environmental literacy of individuals. We focus on the way in which concepts are formed and how these could have an impact on teaching of environmentally related issues. The role of teacher education to ensure that teachers are environmentally literate and concepts, which should be enhanced during teacher education to ensure an environmentally literate population, are discussed.

Introduction

The right to a clean and healthy environment is protected in the Constitution of the Republic of South Africa (RSA) (RSA, 1996:16). This right is also highlighted in the goals of the Reconstruction and Development Programme (RDP), for example, to meet the basic needs of the people (African National Congress, 1994:40). According to Schreuder (1995:3) the establishment of such a clean and healthy environment depends on the provision of quality education. The provision of quality education is expected to empower communities to act on environmental issues and to promote an environmental ethic (African National Congress, 1994:40) so that they can take part in the

wise use of natural resources and good management of the environment. It is, however, doubtful whether it is possible to improve or maintain a healthy environment through the same kind of content-oriented education offered by the previous education departments in the RSA.

When the advancement of a healthy environment is discussed, reference is made to various concepts or aspects. These aspects include the behavioural patterns of people (Grieve & van Staden, 1985:135), attitudes of people (Firth, 1995:59), knowledge of ecology (Rockcastle, 1989:8; Schaefer, 1992; Orr, 1992), the nature of control and power exercised by human beings on the environment (Plant, 1995:26), environmental ethics (Firth, 1995:58) and the environmental literacy of people (O'Neal & Skeleton, 1991/1992:158; Shongwe, 1997:3). The latter could be seen as the overarching aspect which is essential to achieve a sustainable future for all so that the present and future generations can share the resources of the environment. A clean and healthy environment is therefore dependent on the environmental literacy of people.

Teachers can play a substantial role in uplifting the level of environmental literacy of the population. The effectiveness of teaching in the classroom is, however, influenced by the background knowledge of teachers (Prawat, 1992:356) and this obviously gives meaning and direction to classroom practice (Ballantyne & Tooth-Aston, 1987:3; Beatties, 1995:59). It is also obvious that teachers are the ones who