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Post-apartheid attitudes of high school pupils towards the racial integration of schools in South Africa

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1.2. Moving from racially segregated to multi-cultural education

While the South African situation is unique, it is worth examining, and learning from, international practices with respect to the desegregation of schools. International policy decisions and considerations with regard to the integration of schools has largely been guided by the contact hypothesis. In the USA for example, the idea that contact between members of different groups under appropriate conditions, reduces intergroup prejudice and hostility, has provided the rationale for desegregation policies in education (Brown, 1988; Brown & Turner, 1981). McConahay's (1981) study supports this view. He found that the racial integration of pupils led to more favourable interracial contacts and friendships, than conditions of segregation, even in the absence of programmes geared to promote racial integration (cited in Katz, Schmida & Dor-Shav, 1986). Similarly, Katz, et al. (1986), in their study of two integrative junior high schools and two regular high schools in Israel, found that the integrative classroom pupil-body appeared to be an organization that promoted positive changes in pupils' behaviour towards students from different ethnic groups.

However, research has shown that contact does not necessarily improve intergroup relations. St. John (1975, p. 85), for example, after a thorough review of over 100 studies that explored the effects of desegregation on pupils in America concluded, "this review of research on racial attitudes and behavior in schools indicates that desegregation sometimes reduces prejudice and promotes interracial friendship and sometimes promotes, instead, stereotyping and interracial cleavage and conflict. Lombardi (1962a&b), for example, in his study which investigated factors affecting attitude change, found no mean change in attitude in either the experimental or control groups following desegregation. Similarly, Whitmore (1956) found that "white" students tested after desegregation had occurred, had less favourable attitudes towards "black" students than those tested before desegregation occurred. This may, in part, be explained by the fact that, as Miller (1990, p. 13) points out, "within actual desegregated school settings, the requisites of contact theory are rarely met".

colour, sexual orientation, age, disability, religion, conscience, belief, culture or language. Pupils have the right to instruction in the language of their choice, but only where this is reasonably practical (Teachers' League of South Africa, 1996). No school is allowed to discriminate against pupil admissions on the grounds of affordibility and corporal punishment has been outlawed (Lewis, 1996). A standard pupil-teacher ratio of 1:40 has been set at primary schools and 1:35 at high schools (Lewis, 1996).

While the Bill is aimed at equity, the desegregating of schools may result in an exodus of "white" pupils from the Public Schools. As Lewis (1996, p. 6) asks, "How many non-paying pupils can a former 'Model C' school take before paying parents move to private schools?". Indeed, Gauteng's MEC for Education has reportedly stated that "white" English-speaking pupils in Johannesburg's more affluent suburbs are leaving public schools (Bot, 1996). Further, the desegregation of the schools will result in the mixing of educationally advantaged and disadvantaged pupils as the provision of education in the past was discrepant depending on the pupil's racial classification. Parents have often withdrawn their children from integrated schools in countries where integration has resulted in a large number of disadvantaged pupils entering the schools because of fears that the standard of education at the school will drop (Bot, 1992). As Bot (1992, p. 66) states, "integration... inevitably gives rise to concern about how well black pupils will cope in these schools, as well as how, under these circumstances, the schools will maintain their present standards".

Zimbabwe is a case in point. "White" government schools were integrated within a relatively short period, but without adequate preparation to cope with the educational consequences. An exodus of "white" pupils to private schools ensued as a result of a perceived drop in standards, overcrowding and the emigration of teachers (Bot, 1992). The important fact for South Africa lies in how the integration of schools will be managed.

extremely restrictive admission criteria. Indeed, the 1991 government admission policy options for "white" State schooling resulted in only a small minority of "black" pupils being admitted into some of the previously racially segregated schools.

The recent advent of democracy has resulted in sweeping changes to schooling in South Africa. The National Education Policy Act No. 27 of 1996 states that the Minister of Education has the power to determine national educational policy, but s/he has to do so in accordance with the provisions of the Constitution and the Act (Teachers' League of South Africa, 1996). The South African Schools Bill of 1996 has been published for information and comment. The provisions of the Bill will apply from the beginning of 1997.

The Bill proposes that schools will be either Public Schools or Independent Schools. Each Public School will have a governing body which is made up of learners at the school, educators at the school, non-educator staff, the Principal, co-opted members of the community, and, in the case of high schools, learners nominated by the Student's Representative Council of the school (Teachers' League of South Africa, 1996). Public Schools will be able to determine their own admission policies, mission and character, but this must be in accordance with the constitution (Alfreds, 1996). Indeed, a recent incident in which a parents' governing body tried to forcibly turn away "black" pupils culminated in the Supreme Court ruling that the governing body's attempts to exclude these children was unconstitutional, and therefore, illegal.

Independent schools may be established at their own cost by any persons, provided that there are no admissions discrimination on the basis of race group membership (Teacher's League of South Africa, 1996). Teachers at the Independent Schools will be employed privately (Bot, 1996).

School attendance shall be compulsory for children from age 7 to 15, Grade I to IX. No discrimination will be permitted on the grounds of race, gender, ethnic and social origin,

1. INTRODUCTION

1.1. History of the South African Education System

The South African education system has been characterized by a long history of racial discrimination and segregation. Separatist practices in education were however only officially formalized after 1948 with the coming to power of the National Party who instituted segregated, differentiated education for different racial groups, and exerted state control over education in the interests of Afrikanerdom (Hofmeyr & Buckland, 1992). As Hofmeyr & Buckland (1992, p. 20) state, "during the last forty years education has been used to divide and control, to protect white privilege and power - socially, economically and politically". As such, the policy of "separate and unequal" education dominated the development of educational provision in South Africa (Freer & Christie, 1992a).

Inequalities in the provision of differentiated schooling resulted in gross disparities between the various schools. Pupil-teacher ratios, facilities, resources, and qualifications of teachers in schools, were discrepant according to specific racial determinants (Freer, 1992).

From the mid 1970s onwards, private and religious schools in South Africa began to actively challenge the apartheid policy of racially segregated education by admitting a limited number of "black" pupils to schools that were registered as "white" (Freer & Christie, 1992a).

From 1991, government policy allowed for the limited desegregation of "white" government schools, where desegregation was supported by a high percentage of parents at an individual school (Metcalfe, 1991). The new policy allowed the management committee of a school to propose to the parents of a school, any one of three new admission models. While these models were interpreted by some as a positive step in the move towards desegregation, many educationalists (for example, Carrim, 1992; Metcalfe, 1991) warned that there were no structures that existed to prevent schools from adopting

CLARIFICATION OF TERMS

White, African, Coloured, Indian & Other 'ethnic' groups:
The South African Population Registration Act, No. 30 of 1950 introduced several categories into which everyone in the country had to be classified. The main divisions were: White, African, & Coloured, with Asians (who were subdivided into Chinese and Indians) as the main subdivision of Coloured. As Burman (1986, p.6) states, "... while the concept of race has been thoroughly discredited as a meaningful biological classification system, it has acquired a pseudo-reality because of its socio-political consequences. Generations of children have now grown up within this system with uniquely different experiences and attitudes from and about each other despite being members of one nation".

It was decided to maintain these Apartheid terms, to distinguish amongst those groups that could be considered as 'minority' groups before the advent of democracy. Most of these terms are self explanatory, except perhaps for the term "Coloured" and the 'other' race group category. According to the Population Registration Act No. 30, of 1950, a coloured person was defined as "one who in appearance is obviously not white and who is not a member of an aboriginal race or African tribe". "Coloured" South Africans were thus defined by exclusion. The 'other' race group category refers to individuals who do not fit into any of the other categories, for example, Chinese pupils.

"Black" pupils:
This term is used in this paper when referring to all the pupils in the sample, other than the "white" pupils.

Desegregation:
Desegregation refers to the mixing of individuals of different racial or cultural backgrounds. Desegregation may be voluntary or involuntary. It is a term which refers to the transition form segregation to integration. As Whittle (1982, p.2) states, "the aim of desegregation is to modify social institutions and the personal behaviour patterns and value
systems which support a segregated social and educational structure" (cited in Fabian, 1987, p.9).

Integration:
St. John (1975, p. 108) defines integration as referring "to equality of opportunity, to equality of social status, to assimilation, or to its opposite, the acceptance of cultural diversity". The concept of integrated education implies the presence of children from different racial or ethnic groups in the same schools and classrooms.

Multi-cultural education:
Multi-cultural education is education which recognizes and fosters cultural diversity in a plural society.

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ABSTRACT

The primary aim of this study was to assess the attitudes of high school pupils at English-medium government schools towards integrated schooling. In addition, the study aimed to determine which biographical variables of the pupils were related to their attitudes towards integrated schooling, and whether the socio-economic status and level of integration of the schools were associated with pupils' attitudes. Finally, the study aimed to determine pupils' perceptions of the difficulties and benefits of school integration, as well as to elicit suggestions with regard to facilitating the transition from segregated to multi-cultural education.

The opinions of 804 pupils were obtained via the *Pupil Attitudes To Integration Questionnaire* (PAIQ), which yielded information of a quantitative and qualitative nature. The results indicated that attitudes towards school desegregation are conditioned by individual characteristics of the children, namely, race group membership, gender, and age. The academic achievement level of pupils was not found to significantly influence attitudes towards integration. On the whole, girls held more favourable attitudes towards desegregation than boys. With respect to racial group membership, the "Coloured" pupils held the most positive attitudes, followed by "Indian", "African", and 'other' pupils, with "White" pupils being the least positive of the racial groups. The 15-16 year old pupils were found to hold the most positive attitudes towards the racial integration of schools. They were followed by the 13-14 year old group of pupils, the 19-20 year old pupils, and lastly the 17-18 year old pupils.

The level of integration within the schools which the pupils attended was found to exert a significant influence on pupils' attitudes towards integration. However, no direct linear relationship was found between the degree of integration at the school and pupils' attitudes towards integration. The socioeconomic status of the schools which students attended was not found to significantly influence the pupils' attitudes.

Keywords: Attitudes, Pupils, Integration, Schooling, Race, Education, South Africa, Contact, Desegregation, Intergroup.

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DECLARATION

I hereby declare that this thesis is my own unaided work. It is being submitted for the degree of Master of Education (Educational Psychology) at the University of the Witwatersrand, Johannesburg. It has not been submitted for any degree or examination at any other university.



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The level of "black" enrolment in the majority of the schools in this study is not truly reflective of the racial composition of the broader society, which resulted in the rather narrow and circumscribed level of integration groupings (for example, 25-29% "black" enrolment grouping). While it is unfortunate that the two schools that fall into the lower SES group, are the same two schools which fall into the more than 65% "black" enrolment group, which may confound the results, the schools that fall into the Low SES grouping are more reflective of the broader integrating South African society, with children of all racial groups having to share resources, such as schools.

A total of 804 pupils answered the questionnaire. These pupils were drawn from two Std. 6 (Grade 8)(13-16 years old) and two matric (Grade 12)(17-20 year olds) classes at each school. Their biographical information is summarized in Table 1, p17.

Subjects were also asked to indicate the average symbol or mark that they had received for their previous term/semester of work. Three levels were represented, namely "high achievers" (A or B) (n = 194), "average achievers" (C or D) (n = 457), and "low achievers" (E or F and lower) (n = 94).

easier, was warranted. It is hoped that this study will be used as a guide for further research and that it will provide information which will be beneficial in designing multi-racial school programmes.

2.2. Method

2.2.1. Sample

Eight schools participated in the study. All the schools had been segregated whites-only government schools before 1991. Historically, six of the schools adopted the Model C approach after 1991 (i.e. state-aided semi-private school), while the remaining two schools adopted the Model B (i.e. state school with an open admissions policy) approach during 1991. All of the schools were government English-medium, co-educational secondary schools.

The schools were selected so that they represented four levels of socioeconomic status (SES). There were two schools at each level, namely "upper middle" (no. of subjects attending these schools = 198), "middle" (no. of subjects attending these schools = 211), "lower middle" (no. of subjects attending these schools = 203), and "lower" (no. of subjects attending these schools = 192). The selection of these schools in terms of SES was based on the study by Skuy & Vice (1996), in which principals were asked to validate this SES rating, as no formal record of this information is kept by them.

The schools also represented four levels of integration, with two schools being represented at each level. The four levels are as follows: a) 0-14% "black" enrolment (no. of subjects attending these schools = 211); b) 15-24% "black" enrolment (no. of subjects attending these schools = 183); c) 25-29% "black" enrolment (no. of subjects attending these schools = 218) and; d) more than 65% "black" enrolment (no. of subjects attending these schools = 192). These figures were based on approximations made by the principals as no formal records of this information exist (See Appendix A).

and other studies indicating less positive results. The question that is then raised is what are the factors that are associated with positive effects?

As stated previously, South African research which has concerned itself with the exploration of students' perceptions of racial integration in the schools, has largely been carried out within the private and religious schools. This has tended to result in the exploration of the attitudes and perceptions of an 'atypical', and somewhat privileged, pupil population group. Further, previous research was conducted prior to the advent of democracy, which precluded exploring the attitudes of pupils in schools where desegregation was not a voluntary process, and meant that pupils had unequal status outside of the school setting.

New research therefore needs to be generated so that the attitudes and perceptions of a 'typical' multi-racial student body can be explored. The aim of this study is to investigate the post-apartheid attitudes of South African high school pupils to school integration. More specifically the study attempts to ascertain which individual characteristics of pupils are related to their perceptions of integrated schooling. A number of variables are investigated, which include race, gender, age and academic achievement.

A further aim is to determine the extent to which the socio-economic status of the school influences the pupils' perceptions of integrated schooling. This is particularly important given the fact that the majority of previous South African research was carried out within the private schools which largely fall within the upper to upper-middle classes, which may have confounded previous research findings. Pupils' attitudes in the current study will be explored in schools which represent four different SES levels The level of integration of the school will also be examined as a possible variable which might influence pupils' perceptions.

Finally, it was believed that an assessment of the difficulties and benefits that the pupils are experiencing as a result of integration, as well as their suggestions to make the process

Research is therefore needed which is perhaps more reflective of this group of students' perceptions of integration.

Further, since the recent desegregation of state schools, racial incidents have occurred between "black" and "white" pupils, which is cause for concern. For example, ten pupils were injured during a racial clash at a high school in southern Johannesburg last year. Furthermore, alleged racial incidents involving three city schools in Pretoria were being investigated by a district director of education in January of this year. While it would be wrong to exaggerate the significance of these incidents, underlying racial tension in some of the recently desegregated schools is not completely surprising, especially within the high schools. Most government high school pupils began their schooling in an era of strict school segregation and desegregation at some schools has not been a voluntary process. Research is therefore needed to establish whether incidents such as those cited above are isolated events, that do not reflect the attitudes of the majority of high school pupils, or whether, on the other hand, these clashes reflect the difficulties that pupils are encountering in the transition from segregated to desegregated education. As Whittle (1982, cited in Fabian, 1987, p. 9) states, "the aim of desegregation is to modify social institutions and the personal behaviour patterns and value systems which support a segregated social and educational structure". The establishment of a body of knowledge will lead to a better understanding of how best to ensure the successful integration of South African schools (Bot, 1991).

2. THE STUDY

2.1. Rationale

Both local and international studies concerning pupils' attitudes towards desegregation have revealed mixed outcomes, with some studies indicating that students' racial attitudes and inter-ethnic friendship patterns have been enhanced as a result of school integration,

conducted during the Apartheid era. In line with Miller's (1990) contention, it could be argued that during the Apartheid era "black" pupils did not hold equal status outside of the school situation, and this would have therefore, been a salient factor in determining the quality of their desegregation experiences.

Furthermore, the majority of previous South African research has been conducted within the private and religious schools, which may have led to a lack of generalizability. As far back as 1968, Lever, for example, using the Bogardus Social Distance Test, examined the attitudes of "white" high school pupils towards various ethnic groups. He found that pupils in private schools were more favourably disposed towards "Africans", "Coloureds", and "Indians", than pupils in English provincial schools. Recent research by Skuy & Vice (1996), in which both private and government school teachers' attitudes towards the racial integration of schools was explored, revealed that private school teachers perceived fewer teaching difficulties, anticipated fewer problems, and held more favourable general attitudes to integration than government school teachers.

Further, pupils who attend private schools in South Africa tend to belong to the upper-middle class, and they generally form a 'privileged minority'. Their parents are generally well educated and fairly "liberal" in outlook. Factors such as socioeconomic status, and parental educational levels and outlook, are likely to have impacted on the pupils attitudes towards integration, which may have skewed previous research findings. Patchen (1982), for example, found that, among students of both races, those whose parents had the most education tended to have more positive contacts with peers of other races.

Given the fact that "African" people constitute the clear majority group in South Africa, many "African" pupils will not experience schooling in a racially integrated setting. However, those pupils who are currently attending historically "white" schools, are generally representative of a number of different ethnic groups within the country.

either unfavourable attitude change, or to no attitude change, the pupils were nonetheless, very much in favour of the integration of their schools. Gaganakis (1992) reported that some of the "black" pupils that she interviewed at 'open' private schools in the greater JHB area perceived integration in schools as being context-bound, i.e. "black" pupils reported that interactions with other-race pupils within the school were harmonious, but they reported that social distance increased between groups outside of the school (Gaganakis, 1992).

Freer & Christie's 1986 project investigated the opinions of a sample of private school pupils on issues of race and social change in South Africa. They found that there was clear support for racial mixing, both inside and outside the school, by the majority of pupils (Freer & Christie, 1992a). However, Freer & Christie found consistent differences in pupils' responses along racial lines, with "black" pupils tending to view the opportunities for racial mixing within the schools as more beneficial than did "white" pupils (Freer & Christie, 1992a). As well as finding differences in pupils' responses along a racial dimension, Freer & Christie's study also revealed consistent gender differences, with the general discernible trend being that girls were more positive about major social changes, and gave greater support for racial equality (Freer & Christie, 1992a).

Similarly, Lits'(1992) study of actual and desired friendship and social patterns at three racially mixed primary schools, revealed clear gender differences in which girls appeared to be less racially-constrained than boys in their selection of friends. However, a much earlier study by Lever (1968), revealed no discernible gender differences in the ethnic attitudes of "white" high school pupils.

Given the drastic changes within the South African education system, it is desirable to ascertain the pupils' perceptions of integrated schooling so that the process of moving from segregated to multi-cultural education can be monitored. This is particularly important as to date, South African research which has explored school integration was

1.4. The unique South African situation

While overseas research can be beneficial in the formulation of hypotheses about the impact of desegregation on pupils, we cannot draw definitive conclusions for the unique South African situation, and it is thus important that local research be carried out. The South African situation is very different from that of the American, in that the "black" population group is a minority group in the USA whereas in South Africa, "Africans" constitute the majority of people. Indeed, the South African population's racial composition is 86 per cent "black" (Africans, Asians and Coloureds), and 14 per cent "white" (Foster & Finchilescu, 1986). This will no doubt impact on the perceptions and attitudes of South African pupils (particularly those pupils who belong to minority groups) towards the integration of their schools.

Christie (1990), for example, found that the racial composition of the Catholic high school that pupils attended had significant effects on "white" pupils' responses to racial mixing. "White" pupils responses were more supportive of racial mixing when the percentage of "black" pupils at the school was reasonably high (18% to 29%) as this afforded more opportunities for mixing; but this pattern reversed when schools reached a higher "black" enrolment, in this study 35 per cent.

However, when Skuy & Vice (1996) compared the attitudes of teachers in more and less integrated private schools, they found that the teachers at the more integrated schools (approximately 50% "black" pupils) were significantly more positive in their general perception of integration than those teachers at the less integrated school (less than 35% pupils other than "white"). Further, the teachers at the more integrated school perceived fewer problems associated with integration than their less integrated counterparts (Skuy & Vice, 1996).

Studies have also explored the attitudes of pupils towards school integration. The results of Mynhardt's (1982) field experiment, for example, revealed that, while contact led to

Socioeconomic status has also been found to be an influential variable in many studies. Kinnick (1967), for example, found that individuals having a higher socio-economic status displayed more favourable attitudes towards desegregation (cited in Mynhardt & Du Toit, 1991). Glock, Wuthnow, Piliavin, & Spencer (1975) found prejudice to be related to economic deprivation (cited in Carter, *et al.*, 1980).

Some researchers (for example, McClendon, 1974; Riordan, 1978) draw a distinction between status equality within the contact situation and status outside the contact situation (cited in Miller, 1990). Miller (1990) maintains that a salient factor in determining the quality of the desegregation experience of minority children is the status that they hold outside of the specific contact situation. According to Miller (1990), even when schools and school policies are thoughtfully structured to enhance the position of minority students (as measured by the racial composition of the school and/or by the number of minority teachers at the school), consideration ought to be given to the minority students' structural position in the formal organization of the host community (as measured by the number of minority residents in the community, social class composition of the community, and the like). As Miller (1990, p. 16) states, "to ignore these matters may result in underestimating the impact of the socioeconomic status of the host community as an important factor in the formation of race relations in desegregated schools".

Miller's (1990) study of five Connecticut high schools demonstrated that the more affluent the community, the less welcome the minority students were made to feel. Miller's (1990) findings are consistent with a conflict perspective that argues that the greater the class disparity, the less likely minority students are to feel wanted, both within the school and in the larger community. As Foster and Finchilescu (1986, p. 132) state, "this distinction is particularly germane to South Africa where socially structured status and power differentials assume such significant proportions".

are related to the individual school and have been found to be associated with interracial peer acceptance include: the school environment, administrative style, staff and pupil racial balance, status of pupils, and classroom grouping procedures (Carter, *et al.*, 1980).

St. John's (1975) review of USA research suggested that the impact of school desegregation is dependent not only on the local situation and the manner in which it is implemented, but also on pupils' individual characteristics. St. John (1975) found that among the most relevant of these characteristics are: age, sex, academic ability, and socio-economic status.

With regard to the variable of age, St. John's (1975) review of studies revealed more frequent positive findings for younger "white" children, but more frequent positive findings for older "black" children. Patchen and Davidson (1973) found that high school seniors reported more favourable interracial contact than did freshmen (in St. John, 1975).

St. John and Lewis (1975) found that gender was a much more important source of cleavage than race in their study. Similarly, Thomas in his 1981 study, in which both own-race and other-race group friendship patterns were examined, found that the influence of gender on friendship ratings was a more important determining factor given by all pupils than the influence of race (cited in Thomas, 1984). Useem (1971) found that girls had significantly more positive attitudes towards METCO students (minority students involved in a busing programme in Boston), than did boys.

Social acceptance by "white" students of other race students was found by St. John and Lewis (1975) to be achievement-related. Useem (1971), also found that grade average and acceptance into the school honours programme was significantly related to "white" high school pupils favourable attitudes toward METCO students. Similarly, Lombardi (1962a & b), found that the loss of status through decreasing grades was associated with increased hostility by "white" pupils towards incoming other race pupils.

Bradnum, Nieuwoudt, & Tredoux's (1993) study revealed contradictory evidence with regard to the effects of interracial contact on school children's attitudes. They drew samples of pupils from integrated and segregated South African high schools, and contrasted these groups with a sample of pupils drawn from Zimbabwean high schools. While the Zimbabwean high school pupils had experienced integrated schooling for over ten years, the attitudes of both "black" and "white" Zimbabwean school pupils reflected a high degree of ethnic favouritism towards their own racial grouping. On the other hand, pupils sampled at the South African integrated schools showed minimal levels of prejudice, and perhaps even reverse prejudice (i.e. attitudinal preference for "blacks" over "whites"). Within the segregated government schools, white pupils showed very low levels of ethnocentricity, while black pupils showed a very high degree of racial in-group preference and out-group prejudice (Bradnum, *et al.*, 1993).

Both international and local research that has explored the social effects of contact within schools has failed to consistently show that inter-racial contact *per se* will result in the desired automatic benefits that one might have hoped for. As Bot (1987, p. 42) states, "educational problems are experienced in most societies with marked ethnic divisions whether integrated, assimilated or multicultural approaches are adopted".

It is therefore important to try to identify some of the variables that are involved in providing positive desegregation experiences for pupils. As Patchen (1982, p. 5) states, "what is needed is an understanding of the circumstances under which positive social and academic outcomes will occur and those under which no effects or negative effects will occur".

1.3. Factors affecting attitudes towards racial integration in schools

A four-year longitudinal study of 2 000 children in 50 junior schools in Britain (the ILEA Junior School Project) revealed that the individual school was one of the most important controlling factors when examining multi-racial education (Marland, 1987). Variables that

both white and black, and the resulting hostility and conflict is demoralizing for both groups" (Bagley, *et al.*, 1979, p. 189, cited in Thomas, 1984, p. 72).

Foster and Finchilescu (1986), argue that in a deeply divided social structure, such as South Africa, which has been characterised by a long history of conflict and power imbalance, social identity permeates the personal sphere to such a large degree that interpersonal contact *per se*, even under the most favourable conditions, is not likely to substantially change established social relations. The findings of Mynhardt's (1982) study support this view. The subjects of Mynhardt's study were 972 English-speaking "white" high school girls from ten Roman Catholic Convents who were tested on several attitudinal measures. Some of the pupils had institutional contact with people from other racial groups, while others had no contact. Despite the fact that the conditions in which contact had occurred were favourable, that is, there was strong institutional support, attendance was voluntary, and pupils had equal status and similar socio-economic backgrounds, results revealed that those pupils in the contact group had significantly *less* favourable attitudes towards Africans, Indians and Afrikaners than the non-contact group (Mynhardt, 1982).

However, as is the case with research from the USA, South African researchers who have explored the impact of contact on school pupils attitudes, have found inconsistent results. Luiz and Krige (1981), for example, employed a special group activity programme that was based on contact principles with 93 "white" English-speaking schoolgirls and 65 "coloured" schoolgirls. They found that two short, intensive contact periods produced significant mutual positive attitude change. Further, the "white" girls and "coloured" girls who had been paired together in the activity programme had more positive attitudes towards members of the other ethnic group one year after the programme than they had before (Luiz & Krige, 1984). Fabian's (1987) investigation of high school students' attitudes and adjustment also suggested that both "black" and "white" pupils at desegregated schools were more racially tolerant than their peers who attended segregated high schools.

Indeed, contact theorists argue that one of the requisites for positive relations to occur is the provision of equal status for members of the groups, with strong institutional support. Similarly, dissonance theorists would argue that contact between schoolchildren of different races in a desegregated school setting would produce dissonance, and therefore attitude change, among prejudiced pupils, *provided* the school authorities establish favourable conditions for contact (Mynhardt & Du Toit, 1991). Berman and McLaughlin's (1980) findings, for example, support these contentions. They found that if the school principal was in favour of racial integration and s/he supported and motivated the staff and student body, conditions for healthy inter-racial contacts were fostered (cited in Katz, *et al.*, 1986). Furthermore, effective staff preparation and training has been found to not only reduce the racial prejudices of "white" teachers, but also to promote positive attitudes in high school students (Carter, Detine-Carter, & Benson, 1980).

The organizational structure of classrooms has also been found to influence interracial acceptance between pupils. For example, Hallinan (1976), and Felmlee & Hallinan (1979), found that pupils' friendship choices were more evenly distributed, with less evidence of clique formations, in classrooms where the organizational structure allowed for a high level of interaction amongst the pupils (cited in Thomas, 1984).

The organizational structure of the school can also have profound implications for the formation and maintenance of friendship groups between different race pupils (Thomas, 1984). A consequence of streaming in schools, for example, has been found by Hargreaves (1967) and Driver (1977) to restrict interactions between pupils from different streams (cited in Thomas, 1984). In a country such as South Africa, where "black" pupils have been disadvantaged by unequal education, this has serious implications as it could result in "black" pupils being overrepresented in the bottom streams and underrepresented in the top stream. When schools are seen, through their organizational structures, to mirror and reinforce the divisions and inequalities that exist within the broader society, then a consequence might be that they become "arenas for the expression of frustrations felt by

Responses to the statement , "The opening of schools to all race groups is leading to aggression between pupils of different races" (item 59), were also varied. Fewer pupils agreed or strongly agreed with this statement in the Upper-middle and Middle SES schools (25% and 31% respectively), than in the Lower-middle and Low SES schools (45% and 40% respectively). When race group membership and SES were examined, it was revealed that "white" pupils in the Lower-middle and Low SES schools felt much more threatened than did "African" pupils. Just under half (47%) of the "white" pupils in the Lower-middle SES schools, and 66% of "white" pupils in the Low SES schools, agreed or strongly agreed with this statement, as compared to 33% and 31% of "African" pupils respectively.

While 42% of the males in the total sample agreed or strongly agreed with the statement, "More demands are being placed on me in my present school than in my previous school" (item 60), fewer (34%) females agreed or strongly agreed with the statement. Over half of the older "African" pupils (17 - 20 year olds) and over half of the "white" 19-20 year old pupils agreed or strongly agreed with the statement.

With regard to pupil's average symbol, the largest group of pupils agreeing or strongly agreeing with the statement that more demands were being placed on them was the group of "low achieving" (E - F & lower) pupils (44%), which was consistent for both "African" and "white" pupils. Pupils attending the schools in the low SES group were the largest group within the SES groups to agree or strongly agree with the statement (46%). This was also consistent for both "African" and "white" pupils.

Forty percent of the "white" students who attended the most integrated (>65%) of the schools agreed or strongly agreed with the statement, "I do not think that I am really welcome at an integrated school" (item 63). While only 16% of "African" pupils in the most integrated (>65%) schools agreed or strongly agreed with this statement, they represent the largest of the "African" school integration group of pupils who agreed or strongly agreed with this statement. With respect to socioeconomic status of the schools

SES schools agreed or strongly agreed with this statement, as opposed to only 36% of the "African" pupils who attend the Low SES schools.

Just under one-quarter (24%) of the total sample of younger pupils (13-14 & 15-16 year olds) agreed or strongly agreed with the statement, "School integration is leading to the loss of my cultural identity" (item 54), as compared to only 10% of the total sample of pupils in the older age groups (17-18 & 19-20 year olds). Interestingly, 31% of "African" 'high achievers' agreed or strongly agreed with this statement, as compared to 16% of "white" 'high achievers'. Given the predominantly "white" English-speaking orientation of the schools, it is likely that the majority of 'high achieving' "African" pupils have a good command of English. This may have led to these pupils being more easily accepted by their "white" peers, which may have resulted in the sense that they are being assimilated into the dominant "white" culture, at the cost of their own cultural identities.

Thirty two percent (32%) of "white" pupils agreed or strongly agreed with the statement, "school integration is resulting in too wide a range of ages in classes" (item 56), as compared to 22% of "African" pupils. Amongst "white" pupils, the socioeconomic status and level of integration of the school that pupils attended strongly influenced their responses. While 29% of "white" pupils in the Upper-middle SES schools agreed or strongly agreed with this statement, 64% of "white" pupils who attend the Lower SES schools agreed or strongly agreed with the statement. Similarly, while a quarter (24%) of "white" pupils in the least integrated schools (0-14%) agreed or strongly agreed with this statement, 64% of "white" pupils who attend the most integrated schools (>65%) agreed or strongly agreed with this statement.

Responses to the statement, "Integration is leading to overcrowding in classes" (item 57), were very varied with respect to racial group membership, with over half (52%) of "white" pupils agreeing or strongly agreeing with this statement as compared to a mere 15% of "African" pupils. This marked difference in responses reflects the reality that pupil-teacher ratios were very discrepant in "black" and "white" schools in the past.

The level of integration of the schools also influenced students responses to the statement, "It will be difficult to find work after leaving school as the integration of schools has led to more competition for limited jobs" (item 38). Eighty percent (80%) of the total sample of pupils in the least integrated (0-14%. schools either agreed or strongly agreed with this statement, as compared to 57% of the total sample of pupils at the most integrated (>65%) schools. Race group membership also influenced responses, with 79% of "white" pupils agreeing or strongly agreeing with this statement, as opposed to 43% of the "African" pupils. It is interesting to note that amongst 'high achievers', 81% of the "white" 'high achievers' agreed with this statement, as opposed to only 15% of "African" 'high achievers'. This may reflect the fact that those "African" pupils who achieve well have the expectation that they will be offered a wider range of opportunities in the new South Africa, given affirmative action policies.

Over half of both "white" (52%) and "African" (60%) pupils agreed or strongly agreed with the statement that "the integration of pupils from all the racial groups into schools should be gradual" (item 41). For both "white" (60%) and "African" (73%) pupils, those pupils attending the least integrated schools (0-14%) were most in agreement with the statement, which may reflect that pupils at the least integrated schools anticipate more difficulties than those pupils who attend more integrated schools actually experience. It is however interesting to note that such a large percentage of pupils agreed or strongly agreed with this statement. This may indicate the fact that pupils do not feel appropriate structures exist to enable the process of integration to progress at a rapid rate.

While only 22% of the total sample of pupils who attended the Upper-middle SES schools agreed or strongly agreed with the statement, "I believe that pupils from certain racial groups are treated better than others at this school" (item 45), 43% of the total sample of pupils who attended the Low SES schools agreed or strongly agreed with this statement. However, when one examines race group membership and SES, it becomes clear that this is largely due to the fact that over half (58%) of the "white" pupils who attend the low

of "white" girls agreeing or strongly agreeing with this statement, as compared to only 20% of "African" girls. However, a comparable percentage of "white" boys (32%) and "African" boys (30%) agreed or strongly agreed with this statement. Interestingly, more girls than boys in both 'race' groups agreed or strongly agreed with this statement. Similarly, regardless of racial group membership, pupils attending the 'Lower-middle' and 'Lower' SES schools were the pupils who most agreed or strongly agreed with this statement.

Over a third (38%) of "white" pupils agreed or strongly agreed with the statement, "When pupils and teachers are of different races it causes a communication problem" (item 16), as opposed to a quarter (24%) of the "African" pupils. A high percentage (45%) of "white" males strongly agreed or agreed with this statement, as compared to 29% of "African" males. With respect to age, this was consistent across 'race' groups, with the 19 - 20 year olds for both "white" (46%) and "African" (39%) pupils, being the age group that most strongly agreed with the statement. Similarly, "white" (57%) and "African" (28%) children in the Lower SES schools constituted the largest SES group of pupils who agreed or strongly agreed with this statement.

With regard to social contact, "African" pupils appear to be far more open. For example, in response to the statement, "I believe that dating between the races is a serious problem" (item 26), 43% of "white" pupils agreed or strongly agreed with the statement, as opposed to only 19% of "African" pupils. Race group membership and the level of integration at the schools which pupils attended influenced their responses to this statement. The largest percentage of agreement for the statement (59%) came from the "white" pupils who attended the most integrated (>65%) schools. This is in stark contrast to the "African" pupils, with the largest percentage of agreement (44%) for the statement coming from "African" pupils who attend the least integrated (0-14%) schools. It would thus seem that when pupils belong to a minority group within a school, that they anticipate, and perhaps experience, more difficulties with respect to the formation of inter-racial friendships, perhaps being somewhat socially isolated from the dominant group.

positive, with mean scores for these statements ranging between 3.95 - 4.67. However, the responses to the statements which reflected possible difficulties and practical drawbacks to integration (for example, items 12, 13, 16, 18, 45, & 56 - 60) were less positive, with the mean scores for these statements falling in the 2.93 - 3.15. Pupils thus seem to hold very positive attitudes towards the theoretical principles underlying the racial integration of schools, and they appear to recognize the value of integration. However, the reality and experience of the process of integration is evidently resulting in some difficulties, despite the fact that it is supported by the pupils in principle.

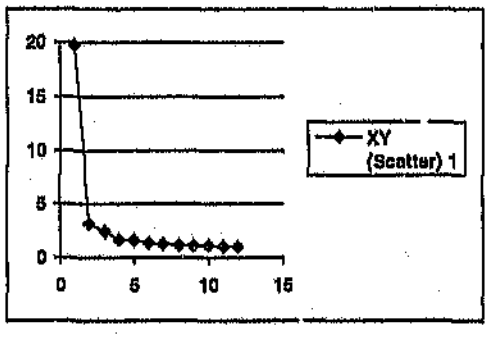
For example, it is interesting to note that while 35-40% of the students agreed or strongly agreed with the statements that standards were dropping at schools as a result of integration (items 12 & 18), 84% of the pupils disagreed or strongly disagreed with the statement, "Children of different races should be taught separately" (item 4).

Where the responses to particular statements were varied, these responses were broken down according to each independent variable. The responses of only the "white" and "African" pupils are discussed here as these two groups represent 93% of the total sample ("whites" - 67% and "Africans" - 26%), with the "African" sample representing the largest minority group within the schools. The responses of the "Indian", "Coloured" and 'other' pupils are not discussed at this time as the sample sizes for these groups is very small and these groups may not, therefore, be representative.

On the statements that directly explored whether pupils felt that standards were dropping as a result of integration (items 12 & 18), almost half of the total sample of pupils in the 17 - 18 year old age group agreed or strongly agreed with these statements. Responses to these statements were also strongly influenced by race, with 50% of "white" pupils agreeing with these statements, as compared to only 13% of "African" students.

Responses to the statement, "Differences in the cultural backgrounds of pupils is causing serious educational problems in integrated schools" (item 13), were also varied, with 36%

TABLE 2: Scree Plot of Eigenvalues >1



3.2. Comparison of means and of the percentage of agreement and disagreement expressed by the respondents to the questionnaire items

The percentage of responses to the total number of statements was established in order to give some indication of how positive (score of 4 or 5), negative (score of 1 or 2), or neutral (score of 3) students felt towards the integration of their schools. Sixty percent (60%) of the pupils' responses to the questionnaire items scored either 4 or 5 points, which indicates that over half of the responses reflect positive pupil attitudes towards integration. Just under one fifth (18%) of the responses to the questionnaire items scored either 1 or 2 points, which indicates that only a relatively small percentage of pupils' responses reflect negative attitudes towards integration. Twenty two percent (22%) of the responses to the questionnaire items scored 3 points, indicating that just over one fifth of pupils' responses reflect a neutral attitude.

The mean score for each statement (see Appendix G), and the percentage of pupils' responses to each of the statements (see Appendix H), were established. The responses of pupils to statements which explored the value of integration (for example, items 1, 35, 42, 47, 49, 51 - 53, & 61), were very positive, with the mean scores for those statements falling between 3.72 - 4.06. Similarly, responses to those items which represent theoretical principles (for example, items 2, 3, 19, 22, 23, 27, & 30), were extremely

Kaplan (1943, p. 230) states, "the technique known as content analysis .... attempts to characterize the meanings in a given body of discourse in a systematic and quantitative fashion" (cited in Berelson, 1954, p.489). The method that was employed to assign numbers to the objects of the content analysis corresponds to nominal measurement, that is, the number of objects in each category was counted after each object was assigned to its proper category.

3. RESULTS

3.1. Factor Structure

Twelve components were retained by Kaiser's rule of eigenvalues greater than or equal to one. Cattell's (1966) scree test was then applied and a graph of latent roots was plotted against the factor number. The shape of the resulting curve was employed to judge the cut-off point (see Table 2, p.23).

The scree plot of eigenvalues indicated a single dominant factor, and this factor was thus the only factor to be retained. This implies that the data represents a unidimensional set, and therefore, that essentially only one construct is being measured. The single dominant factor accounts for 30.8% of the variance of the scores. The items loading highly on this factor (i.e. with loadings greater than 0, 26) include all the items, bar items 40, 41, 60 and 64 (see Table 1, Appendix). The overall reliability of the PAIQ as measured by Cronbach's Coefficient Alpha was 0.96.

Responses to the PAIQ statements were compared across the following criteria:

- gender
- age (13-14, 15-16, 17-18, and 19-20)
- race ("African", "Coloured", "Indian", 'other', and "White")
- academic achievement ("high" achievers - A-B; "average" achievers - C-D; and "low" achievers - E-F and lower)
- socio-economic status of the school (upper-middle; middle; lower-middle; and lower SES)
- level of integration of the school (0-14%; 15-24%; 25-29%; and >65% "black" enrolment)

The two-way ANOVA technique was used to establish whether there were any significant interaction effects. In cases where interaction effects were found, a specific comparison procedure was utilized, the Bonferroni critical values approach, which allows for multiple comparisons. This enabled the researcher to establish which pairs of groups were significantly different from one another within each independent variable, to specify in more detail the source of the significant overall *F*. While this procedure provides conservative tests of statistical si ificance, it nevertheless frequently yields less stringent values (and therefore more powerful tests) than use of other specific comparison tests (for example, Scheffe's contrast method), especially when the total number of comparisons is small (Harris, 1975).

The significant two way interaction effects were analyzed using Dunn's Test. Dunn's test allows for the pairwise comparison of means, whereby a regular *t* test is employed, but the result of the *t* test is evaluated against a modified critical value of *t* (the special values of *t* were compiled by Dunn), so as to limit the familywise error rate (Howell, 1992).

Content analysis was performed on the answers given by the subjects in response to the qualitative questions. Content analysis is a method of studying and analyzing communications in a systematic, objective, and quantitative manner (Kerlinger, 1986). As

2.2.3. Procedure

A letter was sent to the principals at the various schools to inform them of our wish to conduct research within their schools (see Appendix E). The school principals were then contacted telephonically to obtain their verbal permission to include their respective schools in the study and to make the necessary arrangements. Once permission had been granted, the researcher herself either administered the questionnaire to the pupils, or the Pupil Questionnaires were delivered to the school and a member of staff administered the questionnaire, depending on what suited the individual school best. In the latter case, a list of detailed instructions was provided (see Appendix F), and the questionnaires were collected approximately one week later.

2.3. Experimental Design

A range of analysis techniques were used to quantify the information that was gathered from the *Pupil Attitudes to Integration Questionnaire* (PAIQ).

The factor structure of the PAIQ was analyzed in a Principal Component Analysis. Kaiser's criterion, that only those factors that have latent roots greater than one should be considered as common factors, was applied, as this method is particularly suitable for principal components designs (Child, 1970). In order to identify the optimum number of factors which could be removed before the intrusion of non-common variance became serious, Cattell's (1966) scree test was applied.

A one-way Analysis of Variance (ANOVA) technique, the General Linear Models Procedure, was used to compare the responses of the subjects, with each subject's total PAIQ score being the dependent variable. The General Linear Models Procedure was employed due to the fact that it is an unbalanced design.

gender; age; home language; "ethnic" group; academic achievement (average symbol from previous term); primary schooling (integrated or not). The two variables "home language" and "primary schooling" were not included in the final analysis. Too many inconsistencies with respect to pupils' reporting on whether they had attended primary school with children from other racial groups led to the dropping of this variable as a possible factor affecting attitude towards integrated schooling. The variable "home language" was also dropped as too many pupils indicated "other" as their home language, suggesting that too few options were given to pupils, with respect to language, on the questionnaire.

Sixty-four items were of the "closed" type (forced choice questions), where subjects were asked to respond to statements in terms of a 5-point rating scale ranging from *strongly agree* through *neutral* to *strongly disagree*. Pupils scored 5 points when their response reflected strong agreement with a positive statement about integration, and scored 1 point when they strongly disagreed with a positive statement. Thus, the higher the individual's overall score, the more positive his/her attitude towards integration. Frequencies and percentages were calculated for each item.

Three open-ended, qualitative questions were also included. The advantage of these was that they would be less subject to the problem of reactivity to the attitude measurement procedure itself (Foster, 1991). As Foster (1991, p. 503) states, "people may not, in fact, have well defined views regarding a certain attitude object, yet in being required to respond to defined items they respond as if these were well thought out positions". Procedures of measurement could 'create' thought out positions and attitudes.

The open-ended questions that were employed in the Pupil Questionnaire requested information regarding the difficulties and benefits of integrated schooling, and asked for any additional comments or suggestions.

Schlemmer, 1986; Christie, 1990; Dangor, 1990; Freer & Christie, 1992b; Greenberg, Chase & Cannon, 1957; Skuy & Vice, 1996; Stephan & Rosenfield, 1978). In order to establish face validity, the potential questionnaire items were then given to three experts in the field for their comments and suggestions (see Appendix B). Adaptations to these items were made on the basis of their contributions, and a pilot questionnaire was drafted. A pilot study was then conducted within two high schools which were not included in the final study (see Appendix C for a copy of the draft questionnaire). In each school, pupils from two randomly selected Standard 6 and Standard 10 classes completed the questionnaire. The questionnaire gave explicit instructions for students to circle items which they felt were too difficult or ambiguous, and administrators of the questionnaire were asked to encourage students to comment on the structure of the questionnaire.

The reliability of the questionnaire was then established by checking the mean split-half reliability coefficient. Cronbach's coefficient alpha of 0.94 was achieved. An item analysis, in which each item was intercorrelated with the whole scale, was performed to ensure that all the items reflected the single attitude in question. Those items that were highly intercorrelated with this attitude score were regarded as indicative of the underlying attitude, and the majority of items that did not correlate highly with the summed scores were deleted (Stahlberg & Frey, 1988). As a result, most of those items that did not distinguish amongst subjects, or which were ambiguous or appeared to be measuring something other than the attitude in question, were removed, and the remaining intercorrelating and discriminating statements were selected for the final scale (Jaspars, 1978). Pupils' comments regarding repetitious or ambiguous items were also taken into account when finalising the scale.

The *Pupil Attitudes to Integration Questionnaire* (see Appendix D) was structured as follows:

Six questions requested biographical information. The variables thus obtained were:

TABLE 1: Biographical Information on the Subjects

	Frequency	Percent	Cumulative Frequency	Cumulative Percent
GENDER				
Male	373	46.4	373	46.4
Female	431	53.6	804	100.0
AGE				
13 - 14	391	48.6	391	48.6
15 - 16	84	10.4	475	59.1
17 - 18	295	36.7	770	95.8
19 - 20	34	4.2	804	100.0
RACE				
"White"	536	66.6	536	66.6
"African"	205	25.5	741	92.1
"Coloured"	31	3.9	772	96.0
"Indian"	20	2.5	792	98.5
Other	12	1.5	804	100.0

2.2.2. Measure: *The Pupil Attitudes to Integration Questionnaire* (PAIQ)

It was decided that, for purposes of this study, it was better to give a self-administered questionnaire to a large number of respondents, than to provide an individual in-depth interview to a limited number of pupils. The relative ease of administration of a questionnaire meant that it was possible for the researcher to gather data almost simultaneously in a number of schools, thereby permitting comparisons among the schools. The large sample size made it possible to statistically control for the effects of some variables, while analyzing the relationship between others. The major aim of the questionnaire was to gain data from individual pupils about their attitudes towards the integration of their school.

It was necessary to construct a list of possible questionnaire items initially, in which many of the statements were borrowed and adapted from other sources (Bot, 1987; Bot &

groups. Cultural differences and difficulties accounted for four percent (36) of the subjects' responses.

Four percent (30) of the subjects indicated that the various racial groups were not interacting socially. As a matric "African" female pupil states, "they do not try to understand us. It has been four years and they still act stunned by the way black people talk. They say we make noise and we are uncivilized and that this is not Soweto. But they'll have to get used to it because that is the way we are. Every time we participate in activities as a class, we automatically split into different races, not on purpose but naturally".

Three percent (21) of the subjects complained that pupils from other racial groups spoke in their own language which they did not understand, and found infuriating.
Other responses reflect the difficulty that some pupils, particularly "black" pupils, have experienced as a result of attending an integrated school. For example, the comment by an "African" female matriculant who stated, "I feel and believe that in this country we still have a long way of achieving what we call the 'rainbow nation' and this will probably only be achieved by the next generation to come". Another "African" female matric pupil said, "I would like to give advice to those kids who are still going to come to mixed schools. It is not very easy to follow the other racial group's route. You can sometimes feel out and you would really like to leave the school. So, if you want to come to a mixed school, be strong and know what you are there for". A "coloured" female matriculant stated, "I think if parents at home don't necessarily forget the past, but try and put it behind them it will make our lives better at school and at socials".

3.4.2. Benefits

One must note that many more pupils (n = 662 or 82% of the total) responded to the question which asked what benefits they had received as a result of integration, as compared to the number of responses (n = 411 or 51% of the total) to the question which

3.4.1. Difficulties

In response to the qualitative question regarding difficulties encountered in integrated schooling, 12% (93) of the subjects expressed the belief that the academic standards at the school had been compromised. Responses included the belief that academic standards were dropping and that the pace of work had slowed as a result of integration. Some pupils also felt that too much of their teachers' time and attention was being taken up by disadvantaged pupils.

Eleven percent (88) of the subjects stated that racism, stereotyping, and prejudice, were occurring at the school. Responses indicated that the racial prejudice sometimes involved differential treatment, or perception thereof, according to race group by teachers. An "African" female matric pupil stated that "sometimes we are not treated equally. If an African does something wrong she is immediately punished but if whites or coloureds do wrong things, they are given second chances. But the principal does not know about this as it only happens in classes. Our principal is very fair. But some teachers are not and lie to the principal".

Eight percent (66) of the subjects felt that members of other racial groups expected to receive preferential treatment and acted in a superior manner. Further, some of the respondents who were prefects complained that they were unfairly accused of being racist when they were in fact merely carrying out their duties as prefects. As a "white" female prefect stated, "a major difficulty with being a prefect is that when I try to discipline black people they say its just because they're black. Yet when I ask a black prefect to help with discipline, the black people say it is just because the black prefects are just trying to get in with the 'whities'. I feel racism is often used as an excuse".

Five percent (42) of the subjects mentioned that conflict and racial tension had increased as a result of the integration of their school. Four percent (35) of the subjects mentioned communication difficulties and misunderstandings between pupils from different racial

TABLE 4: Content Analysis of Qualitative Responses

	NO.	% OF RESPONDENTS	% OF TOTAL SAMPLE
DIFFICULTIES N = 411			
Academic standards compromised	93	23	12
Racial bias/prejudice	88	21	11
Expect preferential treatment	66	16	8
Conflict / tension	42	10	5
Communication difficulties	35	9	4
Cultural differences	36	9	4
Lack of social integration	30	7	4
Speak in own language	21	5	3
BENEFITS N = 662			
Increased understanding	289	44	36
Improved communication	117	18	15
Friendships / socialising	113	17	14
Respect / acceptance	81	12	10
Different viewpoints/perspectives	49	7	6
Preparation for future life in S.A.	13	2	2
SUGGESTIONS N = 32			
Racially segregated classes/schools	15	47	2
Lessons/classes aimed at improving race relations	10	31	1
Stream classes according to academic ability	3	10	0.3
Multi-racial teaching staff	2	6	0.2
Voluntary/gradual integration of schools	2	6	0.2

pupils held significantly more positive attitudes towards integration than did the 17-18 year old pupils.

With respect to level of integration, pupils attending schools with 25-29% "black" enrolment, and over 65% "black" enrolment, held the most positive attitudes respectively. The pupils attending the schools with 0-14% "black" enrolment constituted the next most favourable group, with pupils in the 15-24% "black" enrolment group holding the least favourable attitudes. Further, those pupils attending schools with 15-24% "black" enrolment were found to hold significantly less favourable attitudes than those students attending both the 25-29% and over 65% "black" enrolment schools. A two-way interaction effect between the age of pupils and the level of integration at the schools which they attend was evidenced.

Neither the academic achievement level of pupils, nor the SES of the schools which they attended, were not found to exert a significant influence on pupils' attitudes towards integration. However, a two-way interaction was found between the SES of the schools which pupils attended and the age of pupils, as well as between the SES of the schools and the level of integration in the schools. Unfortunately the schools falling into the Low SES category, are the same two schools which fall into the over 65% "black" enrolment group, which may have confounded the results.

3.4. Content Analysis

Content analysis was performed on the answers given by the subjects in response to the qualitative questions. The results of the content analysis, in which the frequencies of occurrence for each category are classified, are presented in Table 4, page 38.

However, the findings are inconsistent, with the 17-18 year old pupils who attend the Low SES schools being significantly more positive than the 17-18 year old pupils who attend the Lower-middle SES schools (Low SES/17-18 year olds: $M = 246.045$; Lower-middle SES/17-18 year olds: $M = 226.642$; $p<0.05$).

Furthermore, when attitudes towards integration were explored according to SES and race, inconsistent results were evidenced for the various racial groups (see Table 17, Appendix). For example, "white" and "Coloured" pupils who attended the Upper-middle SES schools held the most positive attitudes towards integration within their respective race groups, but amongst "African" and 'other' pupils, those pupils that attended schools in the Middle SES group, held the most favourable attitudes.

The socioeconomic status of the schools which pupils attend was thus not a significant factor with respect to the attitudes which pupils held towards the racial integration of schools. This result is consistent with Christie's (1990) finding that none of the potential indicators of social class in her survey could discern systematically significant effects on pupils' survey responses.

In sum, the attitudes of high school pupils towards the racial integration of schools, as measured by the PAIQ, are significantly influenced by race group membership, gender, age, and the level of integration at the schools which they attend.

"Coloured" pupils held the most positive attitudes, followed by "Indian", "African", 'other', and lastly, "white" pupils. "Coloured", "Indian", and "African" pupils were found to hold significantly more positive attitudes than "white" pupils, with 'other' pupils in a position not significantly different from any of the groups. Girls were found to be more positive than boys. Amongst the different age groups, pupils in the 15-16 year old group held the most favourable attitudes, followed by pupils in the 13-14 year old group, who were followed by pupils in the 19-20 year old group, and lastly pupils in the 17-18 year old group held the least favourable attitudes towards integration. The 15-16 year old

Lower-middle SES schools held the most negative attitudes ($M = 226.995$). No significant pairwise differences occurred between any of the groups within the independent variable of socioeconomic status of the schools (see Table 14, Appendix).

The finding that pupils attending the Low SES schools hold the most positive attitudes, must be interpreted cautiously as it may well be confounded by the level of integration independent variable, with the Low SES schools unfortunately being the same schools as the >65% "black" enrolment schools (See Table 15, Appendix). Further, SES was significant when it interacted with the variable level of *integration*, although no significant pairwise comparisons were found for the SES and level of integration interaction effect. It is not that uncommon, however, to find that no single pairwise difference between any two group means is significant, even though the overall F is significant (Harris, 1975).

A significant interaction was also found to occur between the age of pupils and the socioeconomic status of the schools which they attend. The following pairs of groups were found to be significant: Middle SES/13-14 year olds * Low SES / 13-14 year olds; Middle SES/13-14 year olds * Lower-middle SES/17-18 year olds; and Lower-middle SES/17-18 year olds * Low SES/17-18 year olds (see Table 16, Appendix).

The first of these interactions indicates that the 13-14 year old pupils who attended the Middle SES schools held significantly more positive attitudes towards integration than the 13 - 14 year old pupils who attended the Low SES schools (Middle SES/13-14 year olds: $M = 244.829$; Low SES/13-14 year olds: $M = 224.161$; $p<0.05$). The 13-14 year old group of pupils who attend the Middle SES schools were also significantly more positive than the 17-18 year old pupils who attend the Lower-middle SES schools (Middle SES/13-14 year olds: $M = 244.829$; Lower-middle SES/17-18: $M = 226.642$; $p<0.01$). These findings suggest that the higher the SES of the school, the more positive pupils' attitudes towards integration.

pupils who gained an average symbol of an A or B for the previous term's work), held the most positive attitudes (M = 236.155). They were followed by those pupils who did poorest academically, 'low achievers' (received an average of an E - F or lower in the previous term) (M = 229.894), with 'average' achievers (received an average of a C - D in the previous term) holding the most negative attitudes towards integration (M = 228.195).

However, this is not consistent across the different racial groups (see Table 12, Appendix). In stark contrast to "white" and "African" pupils, "Coloured" 'low achievers' hold very positive attitudes, and their attitudes appear to have had a considerable impact on the results of the total sample. In point of fact, for both "white" and "African" pupils, those pupils who fall into the 'low achievers' group hold the most negative attitudes (none of the "Indian" or 'other' pupils fall into this group). This may be explained by the fact that for those children who perform relatively poorly, contact occurs under more competitive circumstances, which may foster a sense of threat. This might impede the formation of friendships (Mynhardt & Du Toit, 1991). Further, children who are unequally prepared to compete academically (because of past inequalities in education, for example) may maintain social distance from one another (St. John, 1975).

A significant Bonferroni pairwise difference occurred between the following pair of groups: 'High achievers' & 'Average achievers' (A - B & C - D) (see Table 13, Appendix) Those pupils who received an average symbol of an A or B last term were thus found to hold significantly more positive attitudes towards integration than those pupils who attained an average of a C or D in their previous term.

While the *Socio-Economic* Status (SES) of the school which pupils attend is not significantly related to their attitudes towards the racial integration of the schools, it was revealed that those pupils attending the Low SES schools held the most positive attitudes towards integration (M = 235.427). Pupils who attended the Upper-middle SES group of schools were the next most positive of the SES groups (M = 232.490), followed by the pupils at the Middle SES group of schools (M = 230.242), and lastly the pupils at the

The results support the earlier findings by Christie (1990) that "white" pupils were more supportive of racial mixing when the "black" enrolment of the school was higher (18-29% as opposed to 0-14%), but this trend reversed when schools reached a higher "black" enrolment, that is over 35%. However, unlike Christie's (1990) findings, the present study has found that a similar pattern exists for both "African" and "white" pupils with respect to the level of integration of the schools which pupils attend, and their attitudes towards integration. It must be borne in mind that unfortunately the higher "black" enrolment schools constitute the lower SES schools, which may have confounded the results.

A significant interaction between the age of pupils and the level of integration at the schools which they attended was found. More specifically, the following pairs of groups were found to be significant: 25-29% "black" enrolment/13-14 year olds * 25-29% "black" enrolment/17-18 year olds; and >65% "black" enrolment/17-18 year olds * 25-29% "black" enrolment/17-18 year olds (see Table 11, Appendix).

The 13-14 year old pupils who attend the schools with 25-29% "black" enrolment were found to hold significantly more positive attitudes towards integration than the 17-18 year old pupils at the same schools (25-29% "black" enrolment/13-14 year olds: $M = 243.373$; 25-29% "black" enrolment/17-18 year olds: $M = 227.312$; $p<0.05$). As mentioned previously, this may be due to earlier interracial contacts, and more favourable conditions for contact, for the 13-14 year old pupils, as opposed to the older 17-18 year old pupils.

The 17-18 year old pupils who attend the schools with over 65% "black" enrolment were also found to be significantly more positive than the 17-18 year old pupils within the 25-29% "black" enrolment schools (>65% "black" enrolment/17-18 year olds: $M = 246.045$; 25-29% "black" enrolment/17-18 year olds: $M = 227.312$; $p<0.05$).

While pupils' *achievement* levels, as measured by their previous term's *Average symbol*, were not found to be significantly related to their attitudes towards the racial integration of schools, those pupils who achieved well academically, 'high achievers' (i.e., those

The pupils who are currently in Standard 6 (13 - 16 year olds) can therefore be seen to be more positive in their attitudes towards integration than those pupils who are currently completing matric (17 - 20 year olds). However, these results do not hold true for pupils across the different racial groups (see Table 8, Appendix). For example, the 15 - 16 year old age group is most positive age group for "white" pupils, but for "African" pupils, the 17-18 year old group is the most positive, while for "Coloured" pupils, the 19-20 year old group holds the most positive attitudes.

When the independent variable level of *Integration* was examined, it was found that pupils attending the schools with 25-29% "black" enrolment were the most positive group (M = 236.495), followed by pupils who attended the more than 65% "black" enrolment schools (M = 235.427). The group of pupils who attended schools with 0-14% "black" enrolment followed next (M = 228.749), with the most negative group being those pupils who attended schools with 15-24% "black" enrolment (M = 223.344).

Significant pairwise differences were found to exist between the following pairs of groups: 25-29% & 15-24%; and >65% & 15-24% (see Table 9, Appendix). Pupils attending the more integrated schools, that is, those schools with a "black" enrolment of 25-29% and over 65%, held significantly more positive attitudes towards integration than those pupils attending the schools in the 15-24% "black" enrolment schools. Pupils in the more integrated schools (>25% "black" enrolment) may hold more positive attitudes as they have had more opportunities for establishing interracial friendships, and they are likely to have had more frequent equal status classroom contact.

When attitudes toward integration were analyzed in terms of level of integration and race group membership (see Table 10, Appendix), for both "white" and "African" pupils respectively, pupils who attended the schools with 25-29% "black" enrolment were the most positive group, but were least positive when they attended the schools with over 65% "black" enrolment.

3.3.1. Bonferroni critical values approach & Dunn's Test (Bonferroni t)

Race group membership was found to be significantly related to pupils' attitudes towards the racial integration of schools, with "Coloured" pupils holding the most positive attitudes (M = 262. 677). "Indian" pupils were the second most positive group (M = 259.850), followed by "African" pupils (M = 251.220). Pupils who fell into the 'other' race group category, for example, Chinese pupils, followed next (M = 239.000), with "white" pupils being systematically and significantly less positive towards the racial integration of schools than other race pupils (M = 220.707).

Significant pairwise differences exists between "whites" on the one hand, and "Coloured", "Indian" and "African" pupils on the other hand, with 'other' pupils in an equivocal position, not significantly different from any of the groups (see Table 4, Appendix).

Gender was also found to be significantly related to high school pupils attitudes towards integration, with girls (M = 233.849) being significantly more positive about the racial integration of schools than boys (M = 228.145) in this study (see Table 5, Appendix). The results that girls were more positive than boys was consistent across all the racial groups, except for the "Indian" group, where boys (n = 9) were more positive than girls (n = 11) (see Table 6, Appendix). However, this result must be cautiously interpreted due to the very small sample size.

The *Age* of high school pupils were also found to significantly influence their attitudes towards integration, with 15-16 year olds holding the most positive attitudes towards the racial integration of schools (M = 242.107). The 13-14 year olds held the next most positive attitudes (M = 232.571), and they were followed by the 19-20 year olds (M = 231.235). Lastly, the 17-18 year old pupils were found to hold the most negative attitudes towards integration (M = 226.088), and they were significantly less positive than the 15-16 year old pupils (see Table 7, Appendix).

The ANOVA yielded statistically significant results for 'race', 'gender', 'age', and 'level of integration' main effects. No significant effects were yielded for 'achievement' or 'SES' main effects (See Table 3, p.30).

Race group membership was found to be the most significant of the variables with respect to attitudes towards integration. The gender and age of the pupil were also found to be significant variables, as was the school variable, level of integration. An interaction effect was found to exist between the level of integration of the school which pupils attended and the age of the pupils ($F(9;788) = 5.51$, $p<0.001$)(see Table 3, Appendix).

Neither the achievement level of the pupil, nor the socioeconomic status of the school which the pupil attended, had a significant influence on attitudes towards integration. However, while no significant main effects were found for the variable SES, this variable was significant when a two-way Analysis of Variance Procedure with interaction effects was conducted (see Table 3, Appendix). The analysis revealed a two-way interaction between SES and level of integration of the schools ($F(1;797) = 7.49$, $p<0.01$). An interaction effect was also found between SES of the school which pupils attended and the age of the pupils ($F(9;788) = 6.12$, $p<0.001$).

TABLE 3: Results of the Univariate Analysis of Variance Procedure

SOURCE	DF	TYPE III SS	MS	F
Race	4;797	18900.6518	47225.1629	39.14***
Gender	1;800	6488.535862	6488.535862	4.51*
Age	3;800	18627.95084	6209.31695	4.36**
Achievement	2;742	8666.040978	4333.020439	2.92
SES	3;800	7543.076956	2514.358985	1.75
Integration	3;800	22104.73072	7368.24357	5.19**

* p<0.05 ** p<0.01 *** p<0.001

which pupils attend, those "white" pupils who attend the Lower SES schools represent the group who most strongly agreed (40%) with the statement. Amongst "African" pupils, those students who attended the Lower-middle SES schools constituted the group who most strongly agreed (20%) with the statement.

While nearly a third (30%) of the "African" pupils agreed or strongly agreed with the statement, "I feel that I am expected to change some of my cultural ways so that I fit into the school more" (item 64), only 16% of the "white" pupils agreed or strongly agreed with this statement. More specifically, 19% of "white" boys and 13% of "white" girls agreed or strongly agreed with this statement, as compared to 29% of "African" boys and 32% of "African" girls. Amongst "white" pupils, 34% of pupils who attended the most integrated schools (>65%) agreed or strongly agreed with this statement, which is comparable to the "African" pupils responses, with 32% of "African" pupils in the same schools agreeing or strongly agreeing with this statement. However, while only 14% of "white" pupils attending the least integrated schools (0-14%) agreed or strongly agreed with the statement, 38% of "African" pupils in these schools agreed or strongly agreed with this statement.

3.3. Comparison of attitudes to integration as a function of gender, age, race, average symbol, level of school integration, and socioeconomic status of school

A one-way Analysis of Variance (ANOVA) technique, the General Linear Models Procedure, was used to compare the responses of the subjects, with each subject's total PAIQ score being the dependent variable. The independent variables that were explored with respect to pupils characteristics were race; gender; age; and achievement level. The independent school variables were: level of integration and socio-economic status of the school (see Table 2, Appendix, for mean scores for each level of each independent variable).

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schools. As Mann (1971, p. 67) states, "the abstraction... may not refer realistically to the stimulus in overt racial encounters".

Further, the majority of the schools were previously "whites-only" schools, and as such, many of the "black" pupils are, in essence, being assimilated into the pervasive "white" dominant ethos that remains intact within some of the schools. It is important that this context is borne in mind when interpreting the pupils' stated attitudes towards racial integration within the schools.

4.4. Implications for further research

Further research is needed to investigate the attitudes of "Coloured" and "Indian" pupils to the racial integration of schools. The information that was gathered from these pupils in the present study is limited because of the small sample sizes of these two groups of pupils.

Using the PAIQ, future researchers might assess pupils' attitudes towards integration, in relation to school policies and practices to ascertain what programmes within the schools are impacting positively on pupil's attitudes. This could generate extremely useful information that could be distributed to schools so as to guide their decision-making and multi-cultural programme development and implementation. It is recommended that if future use is made of the PAIQ that it is strengthened by excluding items 40, 41, 60 and 64, as these factors did not load highly (<0,26) on the single dominant factor.

Programmes need to be devised to increase multi-racial co-operation in the schools. Research is thus needed to help devise appropriate, relevant programmes which can be easily implemented within all the schools. Research needs to focus on ways in which the creation of a celebration of multi-cultural diversity within South African schools can be achieved.

which students could discuss cultural differences, difficulties, and the like, in an atmosphere of tolerance and acceptance. It is important that such a class increase pupils knowledge and understanding of each other. Once again, the role of the teacher is vitally important. Teachers need to examine their own possible prejudices and become aware of the impact that their beliefs may have on the pupils they teach. Desegregation of the schools should not be limited to the student body, but should include the realisation of a multi-racial and multi-cultural teaching body.

4.3. Limitations of the study

Despite having conducted a pilot study, certain drawbacks nonetheless occurred. One of the limitations of the study being related to the length of the PAIQ, which resulted in some pupils needing more than one period to complete the questionnaire. Further, the level of the language was at times too difficult for pupils, especially for the second-language and 'disadvantaged' pupils, and the administrator had to explain many of the terms and concepts. At times, the administrator read out each statement aloud to the class, explained what the statement meant, and then allowed the pupils time to mark their response. The length and language of the questionnaire resulted in a small number of the questionnaires being incomplete.

A further limitation of the study lies in the small number of "Coloured" and "Indian" pupils in the sample. This meant that results pertaining to these groups of pupils had to be interpreted very cautiously and lacked generalizability.

It must also be noted that the attitudes explored reflect *stated* attitudes, and may therefore not be truly reflective of the *actual* attitudes that pupils hold towards the racial integration of schools. Furthermore, the researcher may largely be dealing with attitudes to abstractions (for example, "white" pupils attending the schools with a low "black" enrolment level; "black" pupils attending the schools with a low "white" enrolment level; and older pupils), rather than with actual attitudes towards the racial integration of

equal education and equal opportunities. This may be particularly pertinent for "white" pupils who, until recently, gained more privileges and opportunities because of the previous government's protection of "white" interests. Further, the frustration associated with declining achievement may lead some "white" pupils to express this in the form of increased prejudice towards "black" pupils, that is, they may scapegoat the "black" pupils (Lombardi, 1962a).

The SES of the schools which pupils attended did not exert a significant influence on pupils' attitudes towards integration. The fact that the schools which constituted the Low SES schools were the same schools which constituted the most integrated (>65% "black" enrolment) schools may have had a confounding influence on the results.

4.2. Practical Implications

Many state schools assume that the fact that they are open to all races and admit "black" pupils is sufficient in itself to counter the racism of apartheid. As Christie (1990, p. 130) states, "it is also important to recognise that desegregating white schools entails working with an existing legacy of assumptions and practices. These are expressed, for example, in the location and building of the schools, their staffing patterns, sporting and other extramural activities..". Indeed, some "black" pupils made comments with respect to the fact that they perceived themselves to be academically and socially handicapped by not being proficient in English. "Black" pupils may, therefore, perceive their acceptance by their "white" peers to be conditional upon the extent to which they are assimilated into the dominant "white" ethos of the school. As St. John (1975, p.108) states, "desegregation exposes minority group pupils to cultural marginality and confusion unless there is opportunity for choice between assimilation and pluralism".

The need for a revised curriculum and teacher training to foster a multi-cultural learning environment is thus of paramount importance if we are to develop the acceptance of cultural diversity. Further, some of the pupils suggested the provision of a weekly class in

An important factor when analysing the result that the pupils at the 25-29% "black" enrolment schools held the most positive attitudes of the level of integration groupings, is the fact that the 25-29% "black" enrolment schools were the only two schools in the sample which adopted the Model B option (i.e., state school with an open admissions policy) after 1991. The remaining schools all chose to adopt the Model C option (i.e., state-aided semi-private school) after 1991. It is therefore hypothesised that the majority of parents (who had to vote on which Model the school should adopt after 1991) in the Model B schools were more in favour of the voluntary desegregation of their children's schools than the parents in the Model C schools, where admission to the school was probably based on strict admission criteria.

According to dissonance theorists this would impact on pupils' experience of desegregation (Mynhardt & Du Toit, 1991). If, for example, a prejudiced child attends a desegregated school in which the school authorities have provided favourable conditions for contact this will lead to dissonance, which will only be reduced through positive attitude change. However, as Mynhardt and Du Toit (1991, p. 277) state, "should children attend a desegregated school under pressure, such pressure would serve as additional consonant cognitions in respect of contact, and attitude change would become superfluous. ..in order to effect attitude change, contact should occur under relatively voluntary and pleasant conditions". Similarly, Bot (1991), contends that attitudes towards school integration are determined by a number of factors, one of the primary factors being the extent to which integration is a voluntary process supported by parents, staff, and pupils.

While achievement level was not found to be a significant main effect, amongst both "white" and "African" pupils, the lower their average symbol, the more negative their attitudes towards integration. The current South African situation, with the scarcity of employment opportunities, leads to intense competition for jobs following formal schooling. The presence of other-race pupils may therefore increase the sense of threat for those pupils who do poorly academically as all pupils are now being provided with an

most researchers agree that the earlier the contact the better (Carter, DeTine, Spero, & Benson, 1975).

Further, many researchers have found that the *type* of contact is more important than the frequency of contact with respect to fostering interracial acceptance (Carter *et al.*, 1975), which may explain why older "white" pupils hold less positive attitudes. Many of the schools in the study still carry the powerful legacy of being previously "whites-only" schools. Older "white" pupils may not therefore have experienced equal status contact with other race pupils, as other race older pupils form a minority within the schools, and they have been in the difficult position of having to try to break new ground in the transition from segregated to multi-cultural education.

At the time of this study, for example, "white" teaching staff predominated, and "white" pupils were predominant in the senior standards. Opportunities for racial mixing were consequently limited, with some of the older "white" pupils having had no real opportunities to form friendships with other race pupils. Furthermore, other race pupils may not have been afforded equal status contact with their peers given the reality that the positive changes in educational policy have not necessarily resulted in concomitant positive changes in individual school structures, attitudes of teaching staff, and the like.

In contrast with "white" pupils however, amongst "African" pupils the 17-18 year old group constitutes the most positive group. Perhaps the 17-18 year olds form the most positive "African" age group as these pupils are quite likely to have attended primary schools during South Africa's apartheid days, and so they have experienced the effects of high teacher-pupil ratios, underqualified teachers, a scarcity of textbooks, and the like. They may therefore constitute the group that most understands and appreciates the positive consequences of equal multi-cultural education for all, and they therefore represent the most positive of the "African" age groups of pupils.

sample consisted of high school pupils from Catholic open schools. The current study lends support to previous South African research findings (for example, Nieuwoudt, Plug & Mynhardt, 1977; Plug & Nieuwoudt, 1983; Thiele, 1988) that the dominant pattern over the past 60 years, with respect to the attitudes of "whites", has been one of relative stability rather than change, with some evidence in shifts of degree rather than kind during the 1980s (Foster & Nel, 1991). The nineties do not so far appear to be different. This suggests that race group membership is a relatively stable and consistent variable when exploring South African pupils attitudes towards the racial integration of schools, be they private, religious, or state schools.

While the finding that girls hold more positive attitudes than boys to the integration of the schools is consistent with other local and international research findings (for example, Freer & Christie, 1992; Lits, 1992; Useem, 1971), the present study, in contrast to international studies (for example, St. John & Lewis, 1975; Thomas; 1981), found race group membership to be a more important source of cleavage than gender. This may be explained by the fact that historically, given the Apartheid policies of the previous government, South African society was completely stratified according to race group membership. As Foster and Finchilescu (1986, p. 121) state, "... the total pattern of every person's life [was] circumscribed by his or her [racial] classification".

Amongst "white" pupils, the younger pupils held more positive attitudes than the older pupils, whereas amongst "African" pupils, the older pupils held more positive attitudes than the younger pupils. This is consistent with the more frequent positive findings for younger "white" children, but more frequent positive findings for older "black" children, in t studies which were reviewed by St. John (1975).

The fact that the older (17-18 & 19-20 year olds) "white" matric pupils held more negative attitudes towards integration than the younger (13-14 & 15-16 year olds) Standard 6 pupils, might be explained by the fact that the older pupils, are less likely to have experienced interracial contact at an early age during their primary schooling, and

immediate - young people can learn to accept other race groups from a young age but at a ' ' ' h school level, ideas are already entrenched".

In sum, pupils' comments reflected that they felt that there had been more h nefits, as opposed to difficulties, as a result of integration. The difficulties that pupils had encountered included the experience, or perception thereof, of racial stereotyping, prejudice, and tension. Some pupils also held the belief that academic standards were dropping as a result of integration. On the other hand, one-third of the subjects indicated that their understanding of other racial groups had improved as a result of attending an integrated school. Other reported benefits included exposure to a number of different perspectives and improved communication. Some of the pupils made suggestions with regard to integrated schooling. Suggestions included streaming classes on the basis of academic ability, and the implementation of classes to help improve race relations and facilitate understanding amongst members of different ethnic groups.

4. DISCUSSION

4.1. Interpretation of the findings

The attitudes of "white" pupils towards integration were the least positive of all the different race group pupils. This finding contrasts with Bradnum, *et al*'s (1993) finding that both "black" and "white" pupils attending private, integrated, South African schools, exhibited attitudinal preference for "blacks". However, Bradnum *et al.* (1993) acknowledge that their findings are very different to those illustrated in previous research on racial attitudes in South Africa, and suggest that one of the reasons for the discrepancy may be that the subjects in their study were drawn only from the Cape Peninsula.

The current findings, with respect to race and attitudes towards integration, are consistent with Christie's (1990) results, despite the fact that her study, like Bradnum *et al.*'s (1993) study, was conducted before the advent of democracy in South Africa, and that her

that one gained. A small number (13) of subjects (2%) stated that attending an integrated school was preparing them for their future within the broader South African society.

3.4.3. Suggestions

A *small* number of pupils (4%) made some suggestions with regard to integrated schooling. Two percent (15) of the subjects indicated that racially segregated classes or schools should be reintroduced. (It must be noted that the majority of these pupils were "white" pupils from a particular school in the low socioeconomic status group where the "white" pupils are a small minority group within the school). An "African" male matriculant stated, "in the suburbs there should be a 'whites' only school and 'blacks' only school next to each other and that way children will learn properly to love their neighbours. Oil and water never mix. Black and white will never mix no matter what".

One percent (10) of the subjects suggested that schools give classes to help improve race relations and increase understanding between members of different racial groups. A "white" female matriculant stated, "it is not enough to just let people mix together in the same school. The school needs to make an effort to make the pupils mix with each other, otherwise the different groups just keep to themselves and there is no understanding of differences, merely ganging up".

Less than one percent (3) of the subjects felt that classes needed to be streamed on the basis of academic ability. Less than one percent (2) of the subjects indicated that multi-racial teaching staff be introduced into the schools as soon as possible.

Fewer than a percent (2) of the subjects indicated that they felt that integration should be voluntary and/or that it should be a gradual process. For example, a "white" female matric pupil stated, "integration has taken place far too quickly, and disadvantaged white pupils because of a sudden lowering of standards in education. Integration should begin in lower levels of education, so they can build up academic standards, but should not have become

asked about difficulties experienced as a result of integration (see Table 4, page 38). Thirty-six percent (289) of the subjects indicated that attending a racially mixed school had increased their understanding of other racial groups, particularly their understanding of other cultures, customs, traditions, religious beliefs and practices. These comments are very positive when seen in light of the apartheid practices of the past where members of different racial groups (particularly the "white" racial group) had almost no social contact and therefore almost no knowledge of the other racial groups' lifestyles, backgrounds, beliefs, and the like. As one of the matric "African" female pupil states, "I have learned a lot about them. I know what they think of us and we are not at all that different. It's just that we have been brainwashed by our parents since childhood, but they are beginning to see things differently now that they are involved in things with us".

Further, fifteen percent (117) of the subjects stated that they were better able to communicate with members of other racial groups, which included the acquisition of other-language skills. The forming of friendships and the opportunity to socialize and mix with children from other racial groups was said to be beneficial by fourteen percent (113) of the subjects. A matric "African" female pupil stated the following, "it is important that from the school years we learn to mix with the other races in the country. It sometimes makes people realise that their already fixed ideas are wrong by forcing them to socialize with people from other races". This comment is consistent with dissonance theory which states that friendship with a member of another ethnic group increases one's receptiveness to favourable information about that particular group and intensifies the working of cognitive dissonance and the breaking down of negative stereotypes (Mynhardt & Du Toit, 1991). Furthermore, ten percent (81) of the subjects made comments which revolved around the issues of respect and acceptance, and included comments about the realisation that regardless of skin colour we are all similar and equal.

Another benefit that was mentioned by six percent (49) of the subjects was the fact that attending a multi-racial school had increased the number of perspectives and viewpoints

	A	B	C	D	E
18. When pupils of other races have been admitted into my school, I have done my best to accept them as classmates and equals.					
19. I think that academic standards at schools are dropping as a result of other races being admitted into schools.					
20. I am willing to accept as an equal, a member of another race into a club or team to which I belong.					
21. It would make no difference to me if my teachers were of my own race or a different one.					
22. I do not invite students of other races home with me because my parents would not like it.					
23. Every student should have equal rights in regard to holding a position such as prefect or house captain, regardless of race.					
24. Every student, regardless of race, should be able to play for school sports teams, if s/he has the ability to make the team.					
25. The mixing of different racial groups at school functions such as parties is leading to bad feelings between the groups.					
26. Having members of other races on my school's sports teams has resulted in more "dirty playing" and unsportsmanlike conduct.					
27. A member of another race has/could become a very close friend of mine (possibly even my "best friend").					
28. Separate shower facilities and change rooms should be provided for the different races in Physical Education classes.					
29. My parents do not want to work on school parent committees, such as the PTA, with parents of another race.					
30. If I like a person well enough, I accept him/her into my personal group of friends.					
31. I believe that dating between races is a serious problem.					
32. The government's decision to integrate other races into white schools was fair.					
33. I am not willing to sit next to a member of another race in class.					
34. I will not dance with a member from another racial group at a school function.					
35. I will not vote for any pupil for student office (e.g. prefect) unless s/he is of my race.					
36. There is no reason for feeling prejudiced against a person from another racial group.					
37. Separate toilet facilities and drinking fountains should be provided for each racial group.					
38. All race groups are just as likely to get similar marks if they are given an equal education.					

- Some statements regarding integrated schooling are given below. Please respond to the statements in terms of a 5 point rating scale where **A = strongly disagree; B = disagree; C = neutral; D = agree** and; **E = strongly agree** with the statement.
- **Mark the appropriate column with an X.**
- If a statement is **unclear** or **ambiguous**, please circle the number next to the statement.

	A	B	C	D	E
1. Integrated schooling is preparing me for life in South African society.					
2. It does not matter what race the pupils in my class are, provided they are friendly.					
3. All South African children should receive equal education, regardless of race.					
4. It is generally better if children of different races are taught separately.					
5. Integration of schools is doing little to improve the relationships among the different races of pupils.					
6. All white children should learn an African language in school.					
7. The syllabus of most subjects needs to be revised to include material relevant to pupils of all races.					
8. All schools need to give classes on how to improve relationships between the races.					
9. Disadvantage rather than race causes some black children to underachieve at school.					
10. It is important that all schools should teach the children of one race group the history and cultural background of other groups.					
11. The presence of children of different races has improved this school.					
12. The racial mix of a class does not matter as far as learning in a class is concerned.					
13. Racial integration is leading to a lowering of standards of education for white children.					
14. Differences in the cultural backgrounds of pupils is causing serious educational problems in integrated schools.					
15. It is a good thing if teachers of all races are introduced into all schools as soon as possible.					
16. I would not invite a student of another race home with me.					
17. When pupils and teachers are of different races it causes a communication problem.					

E. Place of Birth

SOUTH AFRICA	
OTHER (Please Specify) ..... No. of years in S.A.	

F. What Standard are you in?

STD. 6	
STD. 7	
STD. 8	
STD. 9	
MATRIC	

F. Is your school...

PRIVATE ?	
GOVERNMENT ?	

G. How long have you attended this school?

LESS THAN 1 YEAR	
1 - 2 YEARS	
3 - 4 YEARS	
5 + YEARS	

G. What was your AVERAGE symbol last term?

	SG	HG
A - B		
C - D		
E		
F and lower		

H. Name the PRIMARY SCHOOL which you attended:

_____

Was your primary school racially integrated?

_____

APPENDIX C: Pilot Pupil Questionnaire

- This questionnaire asks for your opinion on a number of issues relating to the racial integration of education.
- The questionnaire is **anonymous** so that you are ensured of complete confidentiality.
- Be sure to give answers which reflect what you really think and how you really feel.

PLEASE NOTE: In this questionnaire the term "integrated school" refers to a school that admits pupils from all race groups.

MARK THE APPROPRIATE BOX WITH AN X.

A. Please indicate whether you are:

MALE	
FEMALE	

B. How old are you?

13 - 15	
16 - 17	
18 - 19	
20+	

C. What is your home language?

ENGLISH	
ZULU	
AFRIKAANS	
SOTHO	
OTHER (Please Specify)	

D. To which "cultural" group do you belong?

"WHITE"	
"AFRICAN"	
"COLOURED"	
"INDIAN"	
OTHER (Please Specify)	

59. Children will learn to value the ethics of other cultures or religions in integrated schools.
60. Children will learn to respect people from other racial groups in integrated schools.
61. School integration will promote harmony between races.
62. A person's race or sex should not block the person's access to basic human rights and freedoms.
63. One goal of education should be the strengthening of respect for human rights.
64. School integration will result in too wide a range of ages in classes.
65. Integration of previously whites-only schools will result in the loss of extra equipment and resources which these schools obtained from the state and from parents fundraising efforts.
66. Integration will lead to overcrowding in classes.
67. The standard of English in English-medium schools will deteriorate with integration.
68. The opening of schools to all race groups will lead to antagonism and violence between pupils of different groups.
69. Voluntary participation, consensus and co-operation of teacher, parent and pupil are necessary preconditions for achieving successful integration in schools.
70. Integration will have a positive effect on the scholastic achievement of disadvantaged pupils.
71. It is important for children from different race groups to socialise with each other in and outside school.
72. My parents oppose the integration of schools.
73. More demands are being placed on me in this integrated school, than in my previous school.
74. School integration is leading to the loss of my cultural identity.
75. I believe that pupils from certain racial groups receive preferential treatment and are given more leeway than pupils in my own racial group.
76. The only reason this school became integrated was to appease the Government.
77. Equal education for all has opened the doors of opportunity to me.
78. Integrated schooling is leading to more intense competition for limited jobs.
79. I feel that I am becoming increasingly marginalised as a result of my school becoming integrated.

28. When integration is accomplished, separate shower facilities and change rooms should be provided for the different races in Physical Education classes.
29. I do not think that my parents would want to work on school parent committees, such as the PTA, with parents of another race.
30. If I liked a person of another race well enough, I would accept him into my personal group of friends.
31. I believe that dating between races will be a serious problem after integration.
32. The government's decision to integrate other races into white schools was just and timely.
33. I do not think that I would be willing to sit next to a member of another race in class.
34. I would not mind dancing with a member of another race at a school function.
35. Separate toilet facilities and drinking fountains should be provided for each racial group.
36. There is no basic reason for feeling prejudiced against another race.
37. I would not vote for any pupil for student office (e.g. prefect) unless s/he was of my race.
38. All race groups are just as likely to achieve similar academic results if they are given equal education.
39. I would respect a teacher of another race as much as I do a teacher of the same race as myself.
40. People from different racial groups are too different to ever become close friends.
41. It is important to me that this is a racially mixed school.
42. Black pupils should adjust to white ways when they attend an integrated school.
43. The racial integration of schools will enable pupils to better communicate with all the racial groups of South Africa.
44. My close circle of friends includes pupils of other race groups.
45. The only difference between racial groups are cultural differences.
46. I am happy that my school is integrating.
47. The integration of schools will have a negative effect on communities.
48. The past disparity in education for the different races and the disadvantaged starting point for black pupils has created serious problems in multiracial education.
49. The integration of all race groups in schools should be gradual.
50. School integration will eventually lead to better relationships among racial groups.
51. Teachers should teach only students of their own racial group.
52. I would prefer to attend a segregated school.
53. There is no difference between black and white pupils at this school. We are all treated similarly.
54. The integration of all schools will eliminate racial prejudice from an early age.
55. The sharing of cultural ideas in integrated schools will lead to better understanding amongst race groups.
56. The school is one of the most important places for establishing friendly relationships amongst different racial groups.
57. Schools should be integrated so that children do not become racists.
58. School integration will encourage social mixing between races.

APPENDIX B:

Potential questionnaire items given to experts in the field for their comments

1. Integrated schooling will best prepare me for life in South African society.
2. It does not matter what race pupils in my class are, provided they are friendly.
3. All South African children should receive equal education, regardless of race.
4. It is generally better that children of different races be taught separately.
5. Integration of schools will do little to improve the race relations among pupils.
6. All white children should learn an African language in school.
7. In an integrated school the syllabus of most subjects needs to be revised to include material relevant to pupils of all races.
8. All schools need to give classes on race relations.
9. Disadvantage rather than race causes some black children to underachieve at school.
10. It is important that all schools should teach the children of one race group the history and cultural background of other groups.
11. The presence of children of different races would enrich the life of the school.
12. The racial composition of a class is irrelevant as far as learning in a class is concerned.
13. Racial integration of schools will lead to a lowering of present standards of education for white children.
14. Differences in the cultural backgrounds of pupils will pose serious educational problems in integrated schools.
15. It would be a good thing if multiracial staff were introduced into all schools as soon as possible.
16. It is inevitable that all schools will eventually become multiracial.
17. When pupils and teachers are of different races it poses a communication problem.
18. When pupils of other races have been integrated into my school, I have done my best to accept them as classmates and equals.
19. I think that the academic standards at schools will drop as a result of other races being integrated into schools.
20. I would be willing to accept, as an equal, a member of another race into a club or team to which I belonged.
21. It would make no difference to me if my teachers were of my own race or a different one.
22. I would hesitate to bring students of another race home with me because I do not think my parents would approve.
23. Every student should have equal rights in regard to holding a position such as prefect or house captain, regardless of race.
24. I believe that every student, regardless of race, should be eligible for school sports teams, if s/he has the ability to make the team.
25. Different racial groups mixing at school functions (dances, parties, etc.) will not be wise - it will only result in fights and ill feeling between the races.
26. Having members of other races on my school's sports teams will result in more "dirty playing" and unsportsmanlike conduct.
27. I believe that a member of another race could become a very close friend of mine (possibly even my "best friend").

If you would like to make comments with respect to the racial integration of your school, or of the schools generally, please do so in the space provided below.

_____

_____

_____

_____

_____

_____

As before, the name of your school, or of the other 7 participating schools, will not be mentioned in any documentation of the results.

Thank you very much for your assistance and co-operation. It is much appreciated.

Yours sincerely

MERVYN SKUY PhD
Professor of Specialised Education &
Head of the Division.

MS HEIDI BURKHALTER
Educational Psychology Intern

APPENDIX A:

Copy of the letter given to the school principals requesting information about the level of integration within their respective schools

Please Note: The researcher and a colleague conducted different research within the same schools at the same time. The researcher's colleague explored the attitudes of teachers towards the racial integration of schools. Reference to previous research and to teachers pertains to her study and not to the current study.

Dear

Thank you for granting us permission to include your school in our current study.

In 1991 we surveyed the attitudes and needs of white high school teachers in a number of Johannesburg high schools in relation to racial integration of the schools. The results obtained from your school were included in the study.

I now have pleasure in enclosing a copy of a draft article which is to be published in the reputable British Journal, *Educational Research*, later this year.

May we request that you do not share this article with the teaching staff until they have completed the "*Teacher Questionnaire*" for our present study. This will ensure that their responses are not contaminated by the previous results. We hope to make a comparison of attitudes then and now. Feedback on the results of the study will be furnished to you as soon as they are available, and hopefully much sooner than the previous results were provided.

For research purposes only, would you kindly indicate the *approximate* percentage of pupils at your school from each of the different race groups:

	Percentage before 1992	Percentage during 1996
"African"		
"Coloured"		
"Indian"		
"White"		
Other		

In the interim period, prior to the opening of all government schools to all races, which Model did your school adopt, and in which year was this implemented?

_____

APPENDIX

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APPENDIX F:
Instructions given with the PAIQ

PUPIL QUESTIONNAIRE:

The 'Pupil Questionnaire' should be completed by the pupils in two of the Standard 6 classes and by the pupils in two of the matric classes. One of the Standard 6 and one of the Standard 10 classes should consist of pupils who achieve well academically, while the other Standard 6 and matric class, should consist predominantly of pupils who do poorly academically.

The 'Pupil Questionnaire' takes approximately 30 minutes to complete. Either a member of staff can administer the questionnaire, for example, the guidance teacher, or Ms Heidi Burkhalter will administer the questionnaire. The choice is yours.

If the questionnaire is administered by a member of staff, they will be collected by Ms Heidi Burkhalter, approximately one week later, or at your convenience.

Should you have any queries with regards the 'Pupil Questionnaire', please don't hesitate to contact Ms Heidi Burkhalter: tel. no., or Professor Mervyn Skuy: tel. no.

Thank you for your co-operation and assistance. It is much appreciated.

If you have any immediate queries, or any requests for information about the study (both past and prospective) don't hesitate to call me.

I look forward to a rewarding collaboration.

Yours sincerely

MERVYN SKUY PhD
Professor of Specialised Education and
Head of the Division.

APPENDIX E:
Copy of the letter requesting permission to do research within the school

Please Note: The researcher and a colleague conducted different research within the same schools at the same time. The researcher's colleague explored the attitudes of teachers towards the racial integration of schools. Reference to previous research and to teachers pertains to her study and not to the current study.

Dear

In 1992, Ms Hilary Vice and I conducted a study in which we investigated the attitudes and needs of white high school teachers to racial integration in the schools. You (or your predecessor) kindly gave us permission to include your school in the study, and to survey the teachers at your school.

This study provided valuable information, and culminated inter alia in the acceptance of a manuscript for publication by the reputable Br ·sh Journal, *Educational Research*. The article will appear in 1996. (Of course, no names of schools will appear there).

Now, with the significant changes that South Africa has undergone since 1992, we consider that it would be very important to do a follow-up investigation of teachers' current attitudes, and to determine the extent of changes in their attitudes and needs that have occurred over these four years. This will enhance the value of the original study, and assist educators to establish the needs of teachers in relation to the new dispensation.

We will send you a copy of the article as soon as it is published next year. Meanwhile, we would be grateful if you would allow us to again survey your teachers early in 1996.

In addition to repeating our earlier study, we would also very much like to extend the investigation, by surveying the attitudes of a sample of your *pupils* of different races to the integration of the schools. I would therefore appreciate it if you could help us to introduce this additional dimension.

I hope it will be acceptable to you if Ms Heidi Burkhalter, my research associate, (and about to qualify as an educational psychologist), were to telephone you early in the new year (towards the end of January) to discuss the prospect of your participating in the study, and to make the necessary arrangements.

The collation and publication of results obtained in the new study should be much quicker than on the previous occasion. We undertake to ensure that you are given a copy of these findings as soon as possible. Should you subsequently wish to discuss them with us, we should be happy to do so.

	A	B	C	D	E
57. Integration is leading to overcrowding in classes.					
58. The standard of English in English-medium schools is getting worse with integration.					
59. The opening of schools to all race groups is leading to aggression between pupils of different races.					
60. More demands are being placed on me in my present school than in my previous school.					
61. Integration is improving the achievement of disadvantaged pupils.					
62. It is important for children from different race groups to mix with each other in and outside school.					
63. I do not think that I will ever feel that I am really welcome at an integrated school.					
64. I feel that I am expected to change some of my cultural ways so that I fit into the school more.					

What difficulties, if any, have you experienced because of the fact that there are children from other race groups in your class?

What have you found to be good about having children of other races in your class ?

If there is anything that you would like to add, please do so in the space provided below (e.g. suggestions/ideas for making things easier; strong feelings; etc.)

Thank-you for your Co-operation in answering this questionnaire.

	A	B	C	D	E
37. The only difference between racial groups are cultural differences (e.g. customs; language).					
38. It will be difficult to find work after leaving school as the integration of schools has led to more competition for limited jobs.					
39. Equal education for all has opened the doors of opportunity to me.					
40. The past inequalities in education have made it more difficult for 'disadvantaged' groups to do well academically in mixed schools.					
41. The integration of pupils from all the racial groups into schools should be gradual.					
42. School integration is leading to better relationships among racial groups.					
43. Teachers should teach only students of their own racial group.					
44. I would prefer to attend a racially segregated school (i.e. no other races).					
45. I believe that pupils from certain racial groups are treated better than others at this school.					
46. The mixing of all schools will stop racial prejudice and discrimination from occurring.					
47. The sharing of cultural ideas in integrated schools has lead to better understanding amongst race groups.					
48. The school is one of the most important places for establishing friendly relationships amongst different racial groups.					
49. School integration has encouraged social mixing between races.					
50. Schools should be integrated so that children do not become racists.					
51. Children are learning to value other cultures and religions in integrated schools.					
52. In integrated schools we are learning to respect people from other racial groups.					
53. School integration is promoting goodwill between races.					
54. School integration is leading to the loss of my cultural identity (e.g. loss of customs and traditions).					
55. My parents are against the integration of schools.					
56. School integration is resulting in too wide a range of ages in classes.					

	A	B	C	D	E
18. I think that the academic standards at schools are dropping as a result of other races being admitted into schools.					
19. I am willing to accept, as an equal, a member of another race into a club or team to which I belong.					
20. It makes no difference to me if my teachers are of my own race or a different one.					
21. I do not invite students of other races home with me because my parents would not like it.					
22. Every studen[illegible]ardless of race, should have equal rights in regard to hol[illegible] a position such as prefect or house captain.					
23. Every student, regardless of race, should be able to play for school sports teams, if s/he has the ability to make the team.					
24. If I like a person of another race well enough, I accept him/her into the group I hang around with.					
25. A member of another race has become a very close friend of mine.					
26. I believe that dating between races is a serious problem.					
27. The government s decision to integrate other races into white schools was fair.					
28. I will not dance with someone from another racial group at a school function.					
29. I will not vote for any pupil for student office (e.g. prefect) unless s/he is of my race.					
30. Pupils from all the racial groups are just as likely to get similar marks if they are given an equal education.					
31. I respect a teacher of another race as much as I do a teacher of the same race as myself.					
32. People from different racial groups are too different to ever become close friends.					
33. I am pleased that this is a racially mixed school.					
34. Attending a mixed school has resulted in my feeling worse about myself (e.g. inferior; inadequate; stupid).					
35. The racial mixing of schools is helping pupils to better communicate with all the racial groups of South Africa.					
36. My close circle of friends includes pupils of other race groups.					

- Some statements regarding integrated schooling are given below. Please respond to the statements in terms of a 5 point rating scale where **A = strongly agree; B = agree; C = neutral; D = disagree** and; **E = strongly disagree** with the statement.
- **Mark the appropriate column with an X.**

	A	B	C	D	E
1. Integrated schooling is preparing me for life in South African society.					
2. It does not matter what race the pupils in my class are, provided they are friendly.					
3. All South African children, regardless of race, should receive equal education.					
4. Children of different races should be taught separately.					
5. The integration of schools is **not** improving the relationships among the different races of pupils.					
6. All children should learn an African language in school.					
7. The syllabus of most subjects should be changed to include material relevant to pupils of all races (e.g. African literature).					
8. All schools need to give classes on how to improve relationships between the races.					
9. It is important that schools teach the children of one race group the history and cultural backgrounds of other racial groups.					
10. The presence of children of different races has improved this school.					
11. The racial mix of a class does not matter as far as learning in a class is concerned.					
12. Racial integration in schools is leading to a lowering of standards of education.					
13. Differences in the cultural backgrounds of pupils is causing serious educational problems in integrated schools.					
14. It is a good thing if teachers of all races are introduced into all schools as soon as possible.					
15. I would **not** invite a pupil from another racial group home with me.					
16. When pupils and teachers are of different races it causes a communication problem.					
17. When pupils of other races have been admitted into my school, I have done my best to accept them as classmates and equals.					

E. Place of Birth

SOUTH AFRICA	
OTHER (Please Specify) ..... No. of years in S.A.	

E. What Standard are you in?

STD. 6	
STD. 7	
STD. 8	
STD. 9	
MATRIC	

F. How long have you attended this school?

LESS THAN 1 YEAR	
1 - 2 YEARS	
2 - 3 YEARS	
3 - 4 YEARS	
4 - 5 YEARS	
5 + YEARS	

G. What was your AVERAGE symbol last term?

A	
B	
C	
D	
E	
F and lower	

H. Name the PRIMARY SCHOOL which you attended:

_____

Did pupils from other racial groups attend primary school with you?

_____

APPENDIX D:
The *Pupil Attitudes to Integration Questionnaire* (PAIQ)

- This questionnaire asks for your opinion on a number of issues relating to the racial integration of education.
- The questionnaire is **anonymous** so that you are ensured of complete confidentiality. No-one will know your answers.
- Be sure to give answers which reflect what you REALLY think and how you REALLY feel.

PLEASE NOTE: In this questionnaire the term "integrated school" refers to a school that admits pupils from all race groups.

MARK THE APPROPRIATE BOX WITH AN X.

A. Please indicate whether you are:

MALE	
FEMALE	

B. How old are you?

13 - 14	
15 - 16	
17 - 18	
19 - 20	

C. What language do you speak **most** often at home? (Choose only one language).

ENGLISH	
ZULU	
AFRIKAANS	
SOTHO	
OTHER (Please Specify)	

D. To which "ethnic" group do you belong?

"WHITE"	
"AFRICAN"	
"COLOURED"	
"INDIAN"	
OTHER (Please Specify)	

What difficulties, if any, have you experienced because of the fact that there are children from other race groups in your class?

What have you found to be good about having children of other races in your class ?

If there is anything that you would like to add, please do so in the space provided below.

Thank-you for the time that you have spent in completing this questionnaire.

	A	B	C	D	E
61. School integration is promoting goodwill between races.					
62. School integration is leading to the loss of my cultural identity.					
63. My parents are against the integration of schools.					
64. School integration is resulting in too wide a range of ages in classes.					
65. Integration of previously whites-only schools is resulting in the loss of extra equipment and resources.					
66. Integration is leading to overcrowding in classes.					
67. The standard of English in English-medium schools is getting worse with integration.					
68. The opening of schools to all race groups is leading to aggression between pupils of different groups.					
69. More demands are being placed on me in my current school, than in my previous school.					
70. Integration is improving the education and achievement of disadvantaged pupils.					
71. It is important for children from different race groups to mix with each other in and outside school.					
72. Pupils from other racial groups get away with more at my school.					
73. I wish that my parents had not sent me to an integrated school.					
74. I have lost self-confidence since I started attending an integrated school.					
75. I do not think that I will ever feel that I am really welc integrated school.					
76. The only reason that this school has accepted pupil racial groups is to keep the Government happy.					
77. I feel that I am expected to change some of my ways so that I fit into the school more.					
78. I believe that the present system of integrated schooling is leading to serious problems for my particular race group.					
79. I feel isolated an alone at this school.					

	A	B	C	D	E
39. I respect a teacher of another race as n uch as I do a teacher of the same race as myself.					
40. People from different racial groups are too different to ever become close friends.					
41. I am pleased that this is a racially mixed school.					
42. Attending a mixed school has resulted in my feeling worse about myself.					
43. The racial mixing of schools is helping pupils to better communicate with all the racial groups of South Africa.					
44. My close circle of friends includes pupils of other race groups.					
45. The only differences between racial groups are cultural differences.					
46. It will be difficult to find work after leaving school as the integration of schools has led to more competition for limited jobs.					
47. Equal education for all has opened the doors of opportunity to me.					
48. The past inequalities in education has made it more difficult for 'disadvantaged' groups to do well academically in mixed schools.					
49. The integration of all race groups in schools should be gradual.					
50. School integration is leading to better relationships among racial groups.					
51. Teachers should teach only student of their own racial group.					
52. I would prefer to attend a racially segregated school.					
53. I believe that pupils from certain racial groups are treated better than others at this school.					
54. The mixing of all schools will stop racial prejudice from developing.					
55. The sharing of cultural ideas in integrated schools has led to better understanding amongst race groups.					
56. The school is one of the most important places for establishing friendly relationships amongst different racial groups.					
57. School integration has encouraged social mixing between races.					
58. Schools should be integrated so that children do not become racists.					
59. Children are learning to value other cultures and religions in integrated schools.					
60. In integrated schools we are learning to respect people from other racial groups.					

TABLE 3: Results of the Two-way Analysis of Variance Procedure with interaction effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Gender	1;790	3732.1485	3732.1485	3.10	0.0788
Race	4;790	185583.6190	46395.9047	38.51	0.0001
Race * Gender	4;790	4386.7379	1096.6845	0.91	0.04574
SES	3;782	4272.1140	1424.0380	1.22	0.3011
Race	4;782	165227.6369	41306.9092	35.41	0.0001
Race*SES	12;782	22375.7803	186484	1.60	0.0869
Integration	3;782	2648.0393	882.6798	0.77	0.5133
Race	4;782	161481.9640	40370.4910	35.03	0.0001
Race*Integration	12;782	17690.0022	1474.1668	1.28	0.2256
Average	2;730	75.619254	3780.9627	3.13	0.0443
Race	4;730	129654.9273	32413.7318	26.83	0.0001
Race*Average	6;730	3798.4635	633.0772	0.52	0.7904
Age	3;784	3034.2826	1011.4275	0.84	0.4728
Race	4;784	105330.7385	26332.6846	21.	0.0001
Race*Age	10;784	12031.4840	1203.1484	1.0	0.4437
SES	2;797	53.59222	26.79611	0.02	0.9812
Integration	2;797	15288.21275	7644.10638	5.42	0.0046
SES*Integration	1;797	105262.08191	10562.08191	7.49	0.0063**

TABLE 2:

Mean scores for each level of each independent variable

Independent Variable	N	Standard Deviation	Mean
GENDER			
Boys	373	37.296	228.145
Girls	431	38.446	233.849
AGE			
13 - 14	391	41.269	232.571
15 - 16	84	33.791	242.107
17 - 18	295	32.580	226.088
19 - 20	34	45.929	231.235
RACE			
White	536	37.389	220.707
African	205	29.093	251.220
Coloured	31	29.589	262.677
Indian	20	22.392	259.850
Other	12	24.395	239.000
AVERAGE SYMBOL			
'High Achievers' (A-B)	194	33.618	236.155
'Average Achievers' (C-D)	457	39.895	228.194
'Low Achievers' (E-F and lower)	94	41.051	229.893
LEVEL OF INTEGRATION			
0-14% "black" enrolment	211	31.532	228.749
15-24% "black" enrolment	183	42.385	223.344
25-29% "black" enrolment	218	34.555	236.495
>65% "black" enrolment	192	42.181	235.427
SOCIOECONOMIC STATUS			
Upper-middle SES	198	36.156	232.489
Middle SES	211	38.905	230.242
Lower-middle SES	203	34.038	226.995
Lower SES	192	42.181	235.427

Questionnaire Items	Factor Loadings
61. Integration is improving the achievement of disadvantaged pupils.	0,55
62. It is important for children from different race groups to mix with each other in and outside school.	0,70
63. I do **not** think that I will ever feel that I am really welcome at an integrated school.	-0,48
64. I feel that I am expected to change some of my cultural ways so that I fit into the school more.	-0,18*

Values less than 0,26 have been flagged by an '*'.

Questionnaire Items	Factor Loadings
39. Equal education for all has opened the doors of opportunity to me.	0,56
40. The past inequalities in education have made it more difficult for 'disadvantaged' groups to do well academically in mixed schools.	0,19*
41. The integration of pupils from all the racial groups into schools should be gradual.	-0,09*
42. School integration is leading to better relationships among racial groups.	0,75
43. Teachers should teach only students of their own racial group.	-0,71
44. I would prefer to attend a racially segregated school (i.e. no other races).	-0,71
45. I believe that pupils from certain racial groups are treated better than others at this school.	-0,30
46. The mixing of all schools will stop racial prejudice and discrimination from occurring.	0,42
47. The sharing of cultural ideas in integrated schools has lead to better understanding amongst race groups.	0,73
48. The school is one of the most important places for establishing friendly relationships amongst different racial groups.	0,70
49. School integration has encouraged social mixing between races.	0,65
50. Schools should be integrated so that children do not become racists.	0,57
51. Children are learning to value other cultures and religions in integrated schools.	0,60
52. In integrated schools we are learning to respect people from other racial groups.	0,75
53. School integration is promoting goodwill between races.	0,71
54. School integration is leading to the loss of my cultural identity (e.g. loss of customs and traditions).	-0,41
55. My parents are **against** the integration of schools.	-0,61
56. School integration is resulting in too wide a range of ages in classes.	-0,38
57. Integration is leading to overcrowding in classes.	-0,54
58. The standard of English in English-medium schools is getting worse with integration.	-0,48
59. The opening of schools to all race groups is leading to aggression between pupils of different races.	-0,51
60. More demands are being placed on me in my present school than in my previous school.	-0,22*

Questionnaire Items	Factor Loadings
18. I think that the academic standards at schools are dropping as a result of other races being admitted into schools.	-0,54
19. I am willing to accept, as an equal, a member of another race into a club or team to which I belong.	0,60
20. It makes no difference to me if my teachers are of my own race or a different one.	0,69
21. I do **not** invite students of other races home with me because my parents would not like it.	-0,58
22. Every student, regardless of race, should have equal rights in regard to holding a position such as prefect or house captain.	0,58
23. Every student, regardless of race, should be able to play for school sports teams, if s/he has the ability to make the team.	0,45
24. If I like a person of another race well enough, I accept him/her into the group I hang around with.	0,60
25. A member of another race has become a very close friend of mine.	0,57
26. I believe that dating between races is a serious problem.	-0,56
27. The government's decision to integrate other races into white schools was fair.	0,66
28. I will **not** dance with someone from another racial group at a school function.	-0,66
29. I will **not** vote for any pupil for student office (e.g. prefect) unless s/he is of my race.	-0,56
30. Pupils from all the racial groups are just as likely to get similar marks if they are given an equal education.	0,60
31. I respect a teacher of another race as much as I do a teacher of the same race as myself.	0,69
32. People from different racial groups are too different to ever become close friends.	-0,52
33. I am pleased that this is a racially mixed school.	0,80
34. Attending a mixed school has resulted in my feeling worse about myself (e.g. inferior; inadequate; stupid).	-0,35
35. The racial mixing of schools is helping pupils to better communicate with all the racial groups of South Africa.	0,71
36. My close circle of friends includes pupils of other race groups.	0,54
37. The only difference between racial groups are cultural differences (e.g. customs; language).	0,58
38. It will be difficult to find work after leaving school as the integration of schools has led to more competition for limited jobs.	-0,27

TABLE 1:

Factor Loadings - Factor 1

Questionnaire Items	Factor Loadings
1. Integrated schooling is preparing me for life in South African society.	0,51
2. It does not matter what race the pupils in my class are, provided they are friendly.	0,56
3. All South African children, regardless of race, should receive equal education.	0,51
4. Children of different races should be taught separately.	-0,59
5. The integration of schools is not improving the relationships among the different races of pupils.	-0,47
6. All children should learn an African language in school.	0,44
7. The syllabus of most subjects should be changed to include material relevant to pupils of all races (e.g. African literature).	0,42
8. All schools need to give classes on how to improve relationships between the races.	0,38
9. It is important that schools teach the children of one race group the history and cultural backgrounds of other racial groups.	0,29
10. The presence of children of different races has improved this school.	0,64
11. The racial mix of a class does not matter as far as learning in a class is concerned.	0,54
12. Racial integration in schools is leading to a lowering of standards of education.	-0,54
13. Differences in the cultural backgrounds of pupils is causing serious educational problems in integrated schools.	-0,44
14. It is a good thing if teachers of all races are introduced into all schools as soon as possible.	0,59
15. I would not invite a pupil from another racial group home with me.	-0,58
16. When pupils and teachers are of different races it causes a communication problem.	-0,49
17. When pupils of other races have been admitted into my school, I have done my best to accept them as classmates and equals.	0,61

	%	%	%	%	%
	A	B	C	D	E
57. Integration is leading to overcrowding in classes.	15.5	25.5	23.9	20.3	14.8
58. The standard of English in English-medium schools is getting worse with integration.	13.1	20.1	31.4	21.3	14.1
59. The opening of schools to all race groups is leading to aggression between pupils of different races.	13.4	22.0	32.7	21.8	10.1
60. More demands are being placed on me in my present school than in my previous school.	15.9	21.7	31.2	19.7	11.5
61. Integration is improving the achievement of disadvantaged pupils.	21.2	43.1	26.3	5.4	4.0
62. It is important for children from different race groups to mix with each other in and outside school.	28.4	38.5	22.8	7.2	3.1
63. I do not think that I will ever feel that I am really welcome at an integrated school.	5.1	7.1	22.2	34.4	31.2
64. I feel that I am expected to change some of my cultural ways so that I fit into the school more.	7.4	12.9	21.5	27.3	30.9

	%	%	%	%	%
	A	B	C	D	E
37. The only difference between racial groups are cultural differences (e.g. customs; language).	31.3	36.4	15.8	12.5	4.0
38. It will be difficult to find work after leaving school as the integration of schools has led to more competition for limited jobs.	36.1	31.7	18.3	8.5	5.4
39. Equal education for all has opened the doors of opportunity to me.	22.0	22.2	30.3	16.2	9.3
40. The past inequalities in education have made it more difficult for 'disadvantaged' groups to do well academically in mixed schools.	19.1	29.4	36.3	10.1	5.1
41. The integration of pupils from all the racial groups into schools should be gradual.	16.5	36.9	31.3	9.6	5.7
42. School integration is leading to better relationships among racial groups.	27.9	41.1	22.3	5.3	3.4
43. Teachers should teach only students of their own racial group.	3.1	3.9	10.0	26.4	56.6
44. I would prefer to attend a racially segregated school (i.e. no other races).	5.1	8.1	19.3	25.8	41.7
45. I believe that pupils from certain racial groups are treated better than others at this school.	13.0	18.8	28.3	19.9	20.0
46. The mixing of all schools will stop racial prejudice and discrimination from occurring.	17.6	25.5	26.1	19.8	11.0
47. The sharing of cultural ideas in integrated schools has lead to better understanding amongst race groups.	26.2	45.3	20.5	6.4	1.6
48. The school is one of the most important places for establishing friendly relationships amongst different racial groups.	37.4	42.8	14.5	3.3	2.0
49. School integration has encouraged social mixing between races.	25.0	45.1	17.2	9.1	3.6
50. Schools should be integrated so that children do not become racists.	39.0	33.2	17.5	5.5	4.8
51. Children are learning to value other cultures and religions in integrated schools.	23.5	40.1	24.5	9.0	2.9
52. In integrated schools we are learning to respect people from other racial groups.	29.1	43.6	18.1	6.9	2.3
53. School integration is promoting goodwill between races.	23.0	40.5	26.9	6.7	2.8
54. School integration is leading to the loss of my cultural identity (e.g. loss of customs and traditions).	7.3	11.1	21.5	34.9	25.2
55. My parents are against the integration of schools.	5.2	6.3	19.8	26.3	42.4
56. School integration is resulting in too wide a range of ages in classes.	10.6	18.7	34.0	23.5	13.2

	%	%	%	%	%
	A	B	C	D	E
18. I think that the academic standards at schools are dropping as a result of other races being admitted into schools.	11.5	23.2	28.4	18.8	18.1
19. I am willing to accept, as an equal, a member of another race into a club or team to which I belong.	49.7	37.6	8.7	1.9	2.1
20. It makes no difference to me if my teachers are of my own race or a different one.	38.9	28.0	19.5	8.2	5.4
21. I do **not** invite students of other races home with me because my parents would not like it.	5.7	7.7	15.7	26.1	44.8
22. Every student, regardless of race, should have equal rights in regard to holding a position such as prefect or house captain.	65.2	25.4	6.1	1.5	1.8
23. Every student, regardless of race, should be able to play for school sports teams, if s/he has the ability to make the team.	74.1	21.1	3.0	0.9	0.9
24. If I like a person of another race well enough, I accept him/her into the group I hang around with.	46.2	33.5	15.0	3.3	2.0
25. A member of another race has become a very close friend of mine.	31.5	25.0	25.4	11.2	6.9
26. I believe that dating between races is a serious problem.	20.3	14.7	28.4	17.8	18.8
27. The government's decision to integrate other races into white schools was fair.	36.7	35.7	18.8	4.4	4.4
28. I will **not** dance with someone from another racial group at a school function.	8.2	7.1	24.6	24.6	35.5
29. I will **not** vote for any pupil for student office (e.g. prefect) unless s/he is of my race.	2.4	1.7	8.3	25.8	61.8
30. Pupils from all the racial groups are just as likely to get similar marks if they are given an equal education.	47.1	30.2	14.0	4.5	4.2
31. I respect a teacher of another race as much as I do a teacher of the same race as myself.	48.1	31.9	13.9	3.7	2.4
32. People from different racial groups are too different to ever become close friends.	4.5	8.1	19.5	33.1	34.8
33. I am pleased that this is a racially mixed school.	32.4	28.1	30.1	5.5	3.9
34. Attending a mixed school has resulted in my feeling worse about myself (e.g. inferior; inadequate; stupid).	3.4	4.5	16.0	31.7	44.4
35. The racial mixing of schools is helping pupils to better communicate with all the racial groups of South Africa.	38.9	36.5	16.1	6.4	2.1
36. My close circle of friends includes pupils of other race groups.	25.4	21.2	21.4	21.9	10.1

APPENDIX H:
Percentage of pupils responses to each statement

	%	%	%	%	%
	A	B	C	D	E
1. Integrated schooling is preparing me for life in South African society.	35.6	41.9	17.8	2.4	2.3
2. It does not matter what race the pupils in my class are, provided they are friendly.	49.9	36.9	8.2	2.5	2.5
3. All South African children, regardless of race, should receive equal education.	68.4	24.0	4.3	1.8	1.5
4. Children of different races should be taught separately.	3.7	3.9	9.0	29.3	54.1
5. The integration of schools is **not** improving the relationships among the different races of pupils.	6.8	14.7	30.6	28.9	19.0
6. All children should learn an African language in school.	10.3	20.4	31.4	17.4	20.5
7. The syllabus of most subjects should be changed to include material relevant to pupils of all races (e.g. African literature).	11.5	25.3	36.0	16.7	10.5
8. All schools need to give classes on how to improve relationships between the races.	17.9	29.3	28.4	17.2	7.2
9. It is important that schools teach the children of one race group the history and cultural backgrounds of other racial groups.	16.2	35.4	27.0	13.0	8.4
10. The presence of children of different races has improved this school.	15.2	25.8	38.7	13.9	6.4
11. The racial mix of a class does not matter as far as learning in a class is concerned.	37.7	35.5	14.1	7.8	4.9
12. Racial integration in schools is leading to a lowering of standards of education.	13.1	27.5	23.9	18.7	16.8
13. Differences in the cultural backgrounds of pupils is causing serious educational problems in integrated schools.	9.9	20.6	34.0	25.7	9.8
14. It is a good thing if teachers of all races are introduced into all schools as soon as possible.	21.7	29.6	28.1	13.2	7.4
15. I would **not** invite a pupil from another racial group home with me.	3.8	5.3	15.3	25.5	50.1
16. When pupils and teachers are of different races it causes a communication problem.	8.5	25.2	30.1	23.2	13.0
17. When pupils of other races have been admitted into my school, I have done my best to accept them as classmates and equals.	37.9	46.2	12.9	1.7	1.3

Variable	N	Mean	Std. Dev.	Sum	Minimum	Maximum
Q40	787	3.4714	1.0677	2732	1.0000	5.0000
Q41	786	2.5102	1.0566	1973	1.0000	5.0000
Q42	789	3.8466	1.0003	3035	1.0000	5.0000
Q43	795	4.2943	1.0095	3414	1.0000	5.0000
Q44	798	3.9098	1.1777	3120	1.0000	5.0000
Q45	799	3.1514	1.2991	2518	1.0000	5.0000
Q46	791	3.1884	1.2503	2522	1.0000	5.0000
Q47	797	3.8808	0.9254	3093	1.0000	5.0000
Q48	794	4.1033	0.9064	3258	1.0000	.0000
Q49	795	3.7874	1.0341	3011	1.0000	5.0000
Q50	788	3.9607	1.1032	3121	1.0000	5.0000
Q51	791	3.7231	1.0128	2945	1.0000	5.0000
Q52	786	3.9046	0.9721	3069	1.0000	5.0000
Q53	787	3.7421	0.9772	2945	1.0000	5.0000
Q54	790	3.5962	1.1862	2841	1.0000	5.0000
Q55	783	3.9438	1.1585	3088	1.0000	5.0000
Q56	785	3.1006	1.1688	2434	1.0000	5.0000
Q57	783	2.9349	1.2912	2298	1.0000	5.0000
Q58	787	3.0330	1.2259	2387	1.0000	5.0000
Q59	789	2.9328	1.1737	2314	1.0000	5.0000
Q60	782	2.8926	1.2245	2262	1.0000	5.0000
Q61	784	3.7207	0.9864	2917	1.0000	5.0000
Q62	781	3.8207	1.0221	2984	1.0000	5.0000
Q63	779	3.7946	1.1126	2956	1.0000	5.0000
Q64	780	3.6141	1.2488	2819	1.0000	5.0000

APPENDIX G:
Mean score for each questionnaire item

Variable	N	Mean	Std. Dev.	Sum	Minimum	Maximum
Q 1	795	4.0616	0.9117	3229	1.0000	5.0000
Q 2	801	4.2921	0.9067	3438	1.0000	5.0000
Q 3	800	4.5600	0.7872	3648	1.0000	5.0000
Q 4	790	4.2620	1.024	3367	1.0000	5.0000
Q 5	783	3.3870	1.148	.625	1.0000	5.0000
Q 6	794	2.8262	1.2585	2244	1.0000	5.0000
Q 7	797	3.1054	1.1371	2475	1.0000	5.0000
Q 8	795	3.3346	1.1647	2651	1.0000	5.0000
Q 9	804	3.3786	1.1523	2716	1.0000	5.0000
Q10	797	3.2949	1.0842	2626	1.0000	5.0000
Q11	794	3.9320	1.1265	3122	1.0000	5.0000
Q12	792	2.9848	1.2888	2364	1.0000	5.0000
Q13	787	3.0483	1.1178	2399	1.0000	5.0000
Q14	798	3.4499	1.1788	2753	1.0000	5.0000
Q15	799	4.1277	1.0917	3298	1.0000	5.0000
Q16	802	3.0698	1.1569	2462	1.0000	5.0000
Q17	800	4.1775	0.8120	3342	1.0000	5.0000
Q18	797	3.0866	1.2646	2460	1.0000	5.0000
Q19	798	4.3095	0.8695	3439	1.0000	5.0000
Q20	800	3.8675	1.1754	3094	1.0000	5.0000
Q21	801	3.9675	1.1922	3178	1.0000	5.0000
Q22	799	4.5081	0.8209	3602	1.0000	5.0000
Q23	799	4.6671	0.6636	3729	1.0000	5.0000
Q24	800	4.1875	0.9426	3350	1.0000	5.0000
Q25	797	3.6299	1.2257	2893	1.0000	5.0000
Q26	797	3.0013	1.3759	2392	1.0000	5.0000
Q27	796	3.9585	1.0614	3151	1.0000	5.0000
Q28	801	3.7191	1.2449	2979	1.0000	5.0000
Q29	99	4.4293	0.8954	3539	1.0000	5.0000
Q30	801	4.1136	1.0774	3295	1.0000	5.0000
Q31	804	4.1970	0.9721	3374	1.0000	5.0000
Q32	800	3.8550	1.1194	3084	1.0000	5.0000
Q33	800	3.7963	1.0741	3037	1.0000	5.0000
Q34	795	4.0918	1.0409	3253	1.0000	5.0000
Q35	797	4.0364	0.9987	3217	1.0000	5.0000
Q36	799	3.2979	1.3288	2635	1.0000	5.0000
Q37	795	3.7849	1.1346	3009	1.0000	5.0000
Q38	797	2.1543	1.1616	1717	1.0000	5.0000
Q39	796	3.3141	1.2406	2638	1.0000	5.0000

TABLE 15:

LEVEL OF INTEGRATION by SES

INT. **SES**

Frequency Percent Row Pct Col. Pct	Upper-middle	Middle	Lower-middle	Lower	Total
0-14%	97 12.06 45.97 48.99	0 0.00 0.00 0.00	114 14.18 54.03 56.16	0 0.00 0.00 0.00	211 26.24
15-24%	0 0.00 0.00 0.00	94 11.69 51.37 44.55	89 11.07 48.63 43.84	0 0.00 0.00 0.00	183 22.76
25-29%	101 12.56 46.33 51.01	117 14.55 53.67 55.45	0 0.00 0.00 0.00	0 0.00 0.00 0.00	218 27.11
>65%	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	192 23.88 100.00 100.00	192 23.88
Total	198 24.63	211 26.24	203 25.25	192 23.88	804 100.00

TABLE 14:

General Linear Models Procedure: Bonferroni (Dunn) T tests

SOCIO-ECONOMIC STATUS

SES Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
Lower - Up-middle	-6.329	2.833	11.995
Lower - Low-middle	-3.825	5.185	14.196
Lower - Middle	-1.030	8.076	17.181
Up-mid. - Lower	-11.995	-2.833	6.329
Up-mid. - Middle	-6.598	2.352	11.303
Up-mid. - Low-mid.	-3.804	5.242	14.289
Middle - Lower	-14.196	-5.185	3.825
Middle - Up-mid.	-11.303	-2.352	6.598
Middle - Low-mid.	- 6.003	2.890	11.783
Low-mid. - Lower	-17.181	-8.076	1.030
Low-mid. - Up-mid.	-14.289	-5.242	3.804
Low-mid. - Middle	-11.783	-2.890	6.003

Comparisons significant at the 0.05 level are indicated by '*'.

Alpha = 0.05 Confidence = 0.95 df = 782 MSE = 1166.651

Critical Value of T = 2.64499

TABLE 13:

General Linear Models Procedure: Bonferroni (Dunn) T tests

AVERAGE

AVERAGE Comparison	**Simultaneous Lower Confidence Limit**	***Difference Between Means***	**Simultaneous Upper Confidence Limit**
A&B - E&F	-5.352	6.261	17.874
A&B - C&D	0.041	7.960	15.879*
E&F - A&B	-17.874	-6.261	5.352
E&F - C&D	- 8.767	1.699	12.165
C&D - A&B	-15.879	-7.960	-0.041 *
C&D - E&F	-12.165	-1.699	8.767

Comparisons significant at the 0.05 level are indicated by '*'.

Alpha = 0.05 Confidence = 0.95 df = 742 MSE = 1483.321

Critical Value of T = 2.39942

TABLE 12:

Mean scores for RACE group within AVERAGE SYMBOL group

RACE GROUP	MEAN SCORE		
	High Achievers	**Ave. Achievers**	**Low Achievers**
WHITE	230.53 (n = 163)	216.71 (n = 313)	214.50 (n = 56)
AFRICAN	265.85 (n = 13)	255.01 (n = 112)	248.82 (n = 33)
COLOURED	270.17 (n = 6)	259.38 (n = 16)	277.40 (n = 8)
INDIAN	266.38 (n = 8)	254.11 (n = 9)	-
OTHER	257.50 (n = 4)	217.80 (n = 5)	-

TABLE 10:

Mean scores for RACE group within LEVEL OF INTEGRATION school group

RACE GROUP	MEAN SCORE			
	0-14%	15-24%	25-29%	>65%
WHITE	226.09 (n = 188)	213.79 (n = 135)	228.31 (n = 160)	196.28 (n = 53)
AFRICAN	248.50 (n = 16)	252.10 (n = 41)	258.83 (n = 40)	248.47 (n = 108)
COLOURED	274.33 (n = 3)	273.67 (n = 3)	250.50 (n = 2)	260.78 (n = 23)
INDIAN	245.50 (n = 2)	274.00 (n = 1)	262.62 (n = 13)	254.50 (n = 4)
OTHER	260.00 (n = 1)	212.00 (n = 2)	252.67 (n = 3)	237.00 (n = 4)

TABLE 11:

***T* Test Procedure: Significant AGE*INT interactions**

AGE*INT	N	Mean	Std. Dev.	*T*	DF
13-14/<30%	102	243.373	35.818	3.3002	193
17-18/<30%	93	227.312	31.758	3.3002	193
17-18/>65%	44	246.045	30.609	-3.2609	135
17-18/<30%	93	227.312	31.758	-3.2609	135

TABLE 9:

General Linear Models Procedure: Bonferroni (Dunn) T tests

LEVEL OF INTEGRATION

INTEGRATION Comparison	**Simultaneous Lower Confidence Limit**	**Difference Between Means**	**Simultaneous Upper Confidence Limit**
25-29% - >65%	-8.790	1.068	10.927
25-29% - 0-14%	-1.873	7.747	17.366
25-29% - 15-24%	3.165	13.151	23.138 *
>65% - 25-29%	-10.927	-1.068	8.790
>65% - 0-14%	-3.256	6.678	16.613
>65% - 15-24%	1.792	12.083	22.373 *
0-14% - 25-29%	-17.366	-7.747	1.873
0-14% - >65%	-16.613	-6.678	3.256
0-14% - 15-24%	-4.657	5.405	15.466
15-24% - 25-29%	-22.138	-13.151	-3.165 *
15-24% - >65%	-22.373	-12.083	-1.792 *
15-24% - 0-14%	-15.466	-5.405	4.657

Comparisons significant at the 0.05 level are indicated by '*'.

Alpha = 0.05 Confidence = 0.95 df = 800 MSE = 1418.386

Critical Value of T = 2.64484

TABLE 8:

Mean scores for RACE group within AGE group

RACE GROUP	MEAN SCORES			
	13-14	**15-16**	**17-18**	**19-20+**
WHITE	221.86 (n = 252)	228.50 (n = 32)	219.56 (n = 239)	200.23 (n = 13)
AFRICAN	249.76 (n = 104)	252.10 (n = 41)	255.40 (n = 42)	247.88 (n = 18)
COLOURED	257.82 (n = 17)	272.80 (n = 5)	258.43 (n = 7)	293.50 (n = 2)
INDIAN	263.13 (n = 15)	-	250.00 (n = 5)	-
OTHER	262.33 (n = 3)	239.50 (n = 4)	217.50 (n = 2)	210.00 (n = 1)

TABLE 7:

General Linear Models Procedure: Bonferroni (Dunn) T tests

AGE

AGE Comparison	**Simultaneous Lower Confidence Limit**	**Difference Between Means**	**Simultaneous Upper Confidence Limit**
15-16 - 13-14	-2.629	9.368	21.365
15-16 - 19-20	-9.406	10.872	31.150
15-16 - 17-18	3.681	16.019	28.357 *
13-14 - 15-16	-21.365	-9.368	2.629
13-14 - 19-20	-16.333	1.504	19.341
13-14 - 17-18	-1.042	6.651	14.344
19-20 - 15-16	-31.150	-10.872	9.406
19-20 - 13-14	-19.341	-1.504	16.333
19-20 - 17-18	-12.921	5.147	23.215
17-18 - 15-16	-28.357	-16.019	- 3.681 *
17-18 - 13-14	-14.344	-6.651	1.042
19-20 - 13-14	-23.215	-5.147	12.921

Comparisons significant at the 0.05 level are indicated by '*'.

Alpha = 0.05 Confidence = 0.95 df = 800 MSE = 1422.732

Critical Value of T = 2.64484

TABLE 5:

General Linear Models Procedure: Bonferroni (Dunn) T tests

GENDER

GENDER	N	Bon Grouping	Mean
Male	373	B	228.145
Female	431	A	233.849

TABLE 6:

Mean scores for GENDER within RACE group

RACE GROUP	MEAN SCORE	
	Boys	Girls
WHITE	218.45 (n = 253)	222.70 (n = 282)
AFRICAN	248.35 (n = 91)	253.51 (n = 114)
COLOURED	251.06 (n = 15)	273.56 (n = 16)
INDIAN	263.22 (n = 9)	257.09 (n = 11)
OTHER	218.00 (n = 5)	248.83 (n = 8)

TABLE 4: General Linear Models Procedure: Bonferroni (Dunn) T tests

RACE

RACE Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
Coloured - Indian	-25.197	2.827	30.852
Coloured - African	-7.372	11.458	30.288
Coloured - Other	-12.876	24.122	61.120
Coloured - White	23.933	41.984	60.035*
Indian - Coloured	-30.852	-2.827	25.197
Indian - African	-14.260	8.630	31.521
Indian - Other	-17.926	21.294	60.515
Indian - White	16.903	39.157	61.410*
African - Coloured	-30.288	-11.458	7.372
African - Indian	-31.521	-8.630	14.260
African - Other	-20.614	12.664	45.942
African - White	22.500	30.526	38.552*
Other - Coloured	-61.120	-24.122	12.876
Other - Indian	-60.515	-21.294	17.926
Other - African	-45.942	-12.664	20.614
Other - White	-14.982	17.862	50.706
White - Coloured	-60.035	-41.984	-23.933*
White - Indian	-61.410	-39.157	-16.903*
White - African	-38.552	-30.526	-22.500*
White - Other	-50.706	-17.862	14.982

Source	DF	Type III SS	Mean Square	F Value	
Age	3;794	20072.51684	6690.83895	4.72	0.0029
Gender	1;794	5846.15524	5846.15524	4.12	0.0427
Age*Gender	3;794	4193.74444	1397.91481	0.99	0.3990
Age	3; 734	8647.343440	2882.447813	1.96	0.1181
Average	2;734	2626.098200	1313.049100	0.89	0.4093
Age*Average	5;734	7204.468055	1440.893611	0.98	0.4281

** p<0.01 *** p<0.001

Source	DF	Type III SS	Mean Square	F Value	
SES	3;733	4729.53897	1576.51299	1.07	
Average	2;733	9100.06495	4550.03247	3.10	0.0457
SES*Average	6;733	16927.88357	2821.31393	1.92	0.0750
SES	3;788	26390.02107	8796.67369	6.56	0.0002
Age	3;788	12431.53094	4143.67369	3.09	0.0264
SES*Age	9;788	77481.87178	8609.09686	6.42	0.0001***
SES	3;794	8774.428165	2924.809388	2.04	0.1070
Gender	1;794	7651.142019	7651.142019	5.33	0.0212
SES*Gender	3;794	2318.388219	772.896073	0.54	0.6559
Integration	3;794	25628.69791	8542.89930	6.04	0.0005
Gender	1;794	9774.64635	9774.64635	6.92	0.0087
Integration*Gender	3;794	2991.42589	997.14196	0.71	0.5489
Integration	3;733	8364.299149	2788.099716	1.90	0.1282
Average	2;733	9414.072076	4707.036038	3.21	0.0410
Integration*Average	6;733	8263.930341	1377.321723	0.94	0.4664
Integration	3;788	24981.56249	8327.18750	6.23	0.0003
Age	3;788	10791.33658	3597.11219	2.69	0.0451
Integration*Age	9;788	66267.20971	7363.02330	5.51	0.0001***
Average	2;737	6127.083310	3063.541655	2.07	0.1271
Gender	1;737	4220.178447	4220.178447	2.85	0.0918
Average*Gender	2;737	1393.891428	696.945714	0.47	0.6248

TABLE 16:

***T* test procedure: Significant AGE*SES Interactions**

AGE*SES	N	Mean	Std. Dev.	*T*	DF
13-14/Middle	105	244.829	36.730	3.3787	190
13-14/Low	87	224.161	47.977	3.3787	190
13-14/Middle	105	244.829	36.730	3.7546	184
17-18/Lower-middle	81	226.642	26.714	3.7546	184
17-18/Low	44	246.045	30.609	-3.6822	123
17-18/Lower-middle	81	226.642	26.714	-3.6822	123

TABLE 17:

Mean scores for RACE group within SES school groups

RACE GROUP **MEAN SCORES**

	Upper-middle	Middle	Lower-middle	Lower
WHITE	225.85 (n = 155)	219.15 (n = 155)	224.98 (n = 173)	196.28 (n = 53)
AFRICAN	257.97 (n = 33)	259.08 (n = 40)	241.21 (n = 24)	248.47 (n = 108)
COLOURED	270.67 (n = 3)	269.00 (n = 4)	257.00 (n = 1)	260.78 (n = 23)
INDIAN	251.80 (n = 5)	264.60 (n = 10)	274.00 (n = 1)	254.50 (n = 4)
OTHER	231.00 (n = 1)	263.00 (n = 2)	228.00 (n = 3)	237.00 (n = 4)

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