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**Academic Achievement, Pupil Participation, and  
Integration of Group Work Skills  
in  
Secondary School Classrooms in the Caribbean**

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Leadership with vision is a major need in making schooling relevant to both the students and society. Principals of 11 secondary schools (5 in Barbados and 6 in Trinidad) allowed their schools to be part of the project. These principals are acknowledged for their vision, which allowed the positive social and academic benefits that have now accrued to their students.

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## PREFACE

Issues of the quality of education, inclusion, and gender now rightly dominate the educational landscape of national governments and the international agencies supporting them.

The complex nature of school improvement—let alone its relationship to school effectiveness—and the tendency for some educational research to focus narrowly upon single issues such as ‘learning outcomes,’ has led to a widening of the gulf between the practitioner in the classroom and the university researcher.

This study is important in narrowing that gulf, both in the focus it gives to holistic and relational issues, and in its inclusive and action-oriented methodology.

First, in terms of strategies for raising the quality of education: it is clear that there is a significant relationship between how well children do with respect to learning outcomes measured by standardized assessment scores, and the extent to which the teacher employs a pedagogy that gives emphasis to the development of group-work skills. The team of Kutnick, Layne, Jules, and Layne demonstrates that not only does the educational performance of the lower-achieving groups significantly rise following exposure to an approach that privileges group work over traditional teaching methods (and in the case of Trinidad and Barbados this has profound implications for traditionally low-achieving boys) but that this ‘alternative’ to traditional chalk’n’talk pedagogy is subsequently legitimized in the eyes of the teachers taking part.

This is important in persuading other teachers, and I suspect parents, that group work and a more inclusive approach to learning benefits not only their own son or daughter but the class as a whole. There is a ‘backwash’ effect too upon the way in which assessment is perceived and carried out. As long as assessment is seen as a solely competitive exercise with few examples of group-task assessments, teachers will be loath to seek alternative ways of teaching and organizing the classroom.

Second, this research also highlights the value of small-scale, action-oriented approaches that both inform the local contexts and also speak to a wider audience concerned about ‘falling standards’ and the assumption that this necessarily means a return to ‘basics’ or traditional teaching methods.

This inclusive group of researchers deserves congratulations for a timely study that provides much food for thought in the drive for higher standards and education for all.

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# **Academic Achievement, Pupil Participation, and Integration of Group Work Skills in Secondary School Classrooms in the Caribbean**

## **Executive Summary**

### **Background**

Based on internationally recognized surveys concerning gender-based educational underachievement in the Caribbean, and criticisms of traditional pedagogic teaching methods in Latin American and Caribbean countries, a new social pedagogic method to enhance classroom achievement and participation was introduced to provide skills to in-service trainee teachers and their pupils in secondary schools in the Caribbean islands of Trinidad and Barbados.

### **Overview of the Literature**

- A range of research approaches has shown that there is a positive relationship between a rise in schooling levels and economic production, but that this link may be limited in systems of education where traditional pedagogic methods have been dominant.
- Studies in Trinidad and Barbados have identified substantial numbers of pupils who educationally underachieve within their classrooms (and across the country).
- Underachievement in education has also been associated with lack of participation by these pupils in classroom and school-based activities, and a corresponding lack of social inclusion skills on the part of teachers.
- Effective group work among pupils is associated with moderately increased levels of classroom achievement (versus traditional classroom pedagogies), increased pupil participation, and greater social inclusion.
- Underlying an effective basis for group work in classrooms is the need for pupils to develop group working and relational skills, and for teachers to legitimize and implement group working in their classrooms.

### **Method**

- Twelve in-service trainee teachers specializing in the teaching of social studies in secondary schools in Trinidad and Barbados expressed an interest in developing group working in their classrooms during their year as trainees.

- An action research study was initiated by providing these teachers with a group work training programme (that would be applied in their classes), and supportive visits by a research officer through the academic year.
- Data were collected from nearly 300 pupils in January and July in the academic year 2003–2004. These data included information from: end-of-term examination scores in social studies, a teacher-based education questionnaire on pupil classroom performance, and a pupil-based questionnaire on working in groups.

## **Results**

- Virtually all pupils improved their academic performance through the two terms of group work in their classrooms. This was especially evident among the lowest achieving pupils (particularly boys).
- Pupils showed generally improving attitudes towards working in groups and achievement in school over the two terms (especially among low achievers).
- Teachers' attitudes and understanding of a 'good pupil' changed over the course of the study—moving away from simple individual skills (good knowledge, good concentration, etc.) to the recognition of the importance of social inclusion and relational skills.

## **Recommendations**

- This study should be expanded to cover a full academic year, with possible quasi-experimental 'control' classes included to test for specific learning and social effects of group working and changes in teacher attitude. This expanded study would combine both quantitative and qualitative data concerning participation and achievement.
- This group work-based pedagogic approach should be extended to other subjects in secondary schools, including language arts and mathematics, two of the subjects in which secondary school graduates need to demonstrate high levels of competence in order to improve their chances of gaining admission to a post-secondary educational institution or to gain entry and compete successfully in the labour market.
- This group work-based pedagogic approach should also be expanded/adapted for use in primary schools since the performance of pupils at the secondary level is substantially dependent on what happens to them at the primary level.



## **Background to the Study**

Human capital research (Harbison & Myers, 1964; Litchfield, 1991; McClelland, 1969) has shown a connection between an improvement in educational achievement and a rise in economic production. The World Bank (1992) argues that improving the level of educational achievement is associated with an improvement in 'staying-on' in school in developing countries, and with dramatic economic and social benefits. This strong economic rationale for development of education has also been built upon internationally. 'Education for All' (EFA) has become a worldwide policy through UNESCO, and the related world 'Plan of Action' aims to universalize primary and early secondary education worldwide (UNESCO, 2000). This policy significantly reflects the universally accepted notion that education is the cornerstone for individual and national development. It should be noted, however, as pointed out by Coleman (1975) a generation ago, that equalizing educational opportunity does not necessarily guarantee equality of outcome. It should not be assumed that the simple provision of educational opportunity through school places has affected all children in the same way, in terms of their level of educational experiences and achievement (Jules, 1998).

The countries with which this study is primarily concerned are found in the Commonwealth Caribbean. These countries have either achieved, or are on the verge of achieving, universal primary and secondary education (Jules, 1994; Jules & Panneflek, 2000; Miller, 2000; World Bank, 1992). In the post-colonial Commonwealth Caribbean, for example, females currently have the same opportunity as males to access all levels of the educational system. However, females have outperformed males in the primary and secondary schools, and have outnumbered them by a massive margin in their enrolment at The University of the West Indies (UWI) (Bailey & Bernard, 2004; Crowe, 2002; Harewood, 2000; Jules, 1999; Kutnick, Jules & Layne, 1997; Layne, 2000). While these latter studies show general levels of educational achievement, it should be remembered that underachievement at the primary and secondary levels still remains a challenge in these schools, and that country-wide statistics concerning number of school places available or accessed do little to identify within-school and classroom processes that may be associated with the lack of pupil achievement.

With a view to improving both the quality of the education provided and the life chances of the children involved, the project reported here took an action research, within-class focus to implement and evaluate a pedagogic method intended to encourage classroom participation and achievement. The project was especially concerned with teachers initiating and implementing within-class activities to enhance the performance of the lowest attaining pupils among both sexes. The project distinguishes between effects of traditional teaching approaches that characterize many of the Caribbean islands and the potential of 'changing' classrooms to improve participation and attainment. In order to achieve the participation and achievement objectives mentioned, efforts were made to modify traditional didactic teaching practices (World Bank, 1999) to include socially participative and inclusive practices for all pupils, especially the underachieving.

Traditional practices have been associated with gender inequities in school achievement (Kutnick et al., 1997) and limitation of labour market opportunities (World Bank, 1999). Traditional, didactic teaching practices are also linked to immediate problems of school dropout and underachievement (Trinidad and Tobago. Ministry of Education, 1999), and dispiriting ‘retention’ within school years—especially among boys (Jules, 1999). Underachieving children in these traditional classrooms tend to exclude themselves from many pedagogic interactions in the classroom, and have poor social skills when interacting with their teachers or classroom peers (Kutnick et al., 1997). These relatively ‘unskilled’ underachievers are unlikely to improve in traditionally-taught classrooms, where:

Current teaching practices and curricula tend to reflect outdated methods and attitudes, which preserve the rich cultural and social history of the past but does [sic] not meet the urgent requirements of the present and pressing needs of the future.... Educational institutions in the LAC [Latin American and Caribbean] region do not seem to provide pupils with the cognitive tools, socialization and labor market skills to allow them to enter the productive sectors of either their own or other countries. (World Bank, 1999, pp. 42–43)

An association between teachers’ traditional approach and underachievement has been seen in primary and secondary schools (see UK studies: Kutnick, Blatchford, & Baines, 2002, 2005; and Caribbean studies: Kutnick et al., 1997). In these studies, the children least likely to receive teacher attention or other social support were underachieving males, while high-achieving females received a majority of teacher attention. Further, these underachieving children did not effectively talk or listen to one another, and rarely showed or received social support from their classmates. Underachieving children who did not demonstrate these skills were not participative within their classrooms (Kutnick et al., 1997). Lack of participation meant that these children did not have opportunities to interact and receive formative (and other) feedback from either teachers or peers. These children were not in a position to ‘test’ their answers, receive corrections, and increase their confidence in making classroom contributions (Black & Wiliam, 1998). Lack of formative feedback is also related to low self-efficacy and low achievement potential (Shunk, 1990). In contrast to low attainment, dropout, and retention associated with traditional classrooms, non-traditional pedagogic theories and studies have identified that higher levels of pupil participation are related to higher attainment and increased interest in schooling (examples include: Jules, 1992; Mercer, 2000; Slavin, 1990; and others).

In order to overcome current patterns of classroom action, the authors sought to combine previous analysis of the causes of classroom inequities in Trinidad and Barbados (Jules, 1992, 1998; Kutnick et al., 1997; Layne, 2000) with a recent (UK-based) programme to enhance socially inclusive group work within classrooms. This programme works with teachers to develop children’s inclusive group working skills while furthering teachers’ understanding of pupils, groupings, and learning tasks; it uses a relational approach that helps to improve children’s classroom attainment and motivation through high levels of participation with classroom peers and teachers. The relational approach has been found

to benefit all children in the class—especially underachieving pupils (Blatchford, Kutnick, Baines, & Galton, 2003).

The importance of understanding and implementing a relational approach for effective group working in classrooms in the Caribbean is based on theoretical and practical concerns. Theoretically, researchers (particularly in the psychological tradition, from Baldwin (1897) to Vygotsky (1978) and Piaget (1928, 1979)) have underlined the importance of interaction among children of school age to promote social, affective, and cognitive development as well as their classroom learning. In addition, experimental research, mainly undertaken in the US, on the effectiveness of within-class groupings has demonstrated positive, albeit modest effects, on pupil achievement, better pro-school attitudes (particularly in multicultural settings), and improved social climate within classrooms (Johnson & Johnson, 1987; Pepitone, 1980; Slavin, 1990). Meta-analytic and other reviews (Kulik & Kulik, 1992; Lou et al., 1996; Slavin, 1987) have demonstrated that with training and support, teachers using small groups can enhance certain forms of pupil learning (especially in large classes) while improving pro-school attitudes and within-class behaviour of pupils. Interaction among pupil peers working in effective groups attests to the potential development that can take place within meaningful environmental contexts (Bronfenbrenner, 1979; Jules, 1992), especially within the classroom.

Herein lies a basic contradiction between the actuality and the potential for learning in schools and classrooms. Traditional classroom pedagogy, often associated with a didactic teaching style, neither allows effective groups to be formed in classrooms nor legitimizes the potential development of group working skills. Neither does the practice encourage teachers to explore alternative pedagogic teaching styles. In current traditional classrooms, the relationship between the social context and learning potential within those classrooms may be seen as inhibiting rather than promoting learning among children (Kutnick et al., 2002). But all is not lost. If an alternative social pedagogy that is *inclusive*—such as relational group learning—can be initiated in classrooms (with the support of teachers), then the potential for all pupils to attain at high levels is likely to be enhanced, as will pro-school attitudes and motivation (Blatchford et al., 2003).

It should be noted that effective group working, whether for cooperative learning or general group-working skills, must be developed sensitively to meet the needs of pupils and teachers. Studies have indicated that teachers and pupils may have doubts about peer and interactive group work in classrooms (Bennett & Dunne, 1992; Cowie, Smith, Boulton, & Laver, 1994; Galton & Williamson, 1992; Plummer & Dudley, 1993). Teachers feel that they may lose control and that children will increase disruptive and off-task behaviour while attempting group work (Cohen & Intili, 1981; Lewis & Cowie, 1993). It has also been claimed that group work is time-consuming, that the ‘brighter’ children are held back by being asked to help the academically less able ones, and that it is problematic assessing children when they are working in interactive groups (Plummer & Dudley, 1993). These concerns reflect the failure both to construct meaningful settings in which group work can take place, and to facilitate pupils in their development of

meaningful group-working skills (Blatchford, Kutnick, & Baines, 1999; Galton & Williamson, 1992).

It was against this backdrop, then, that a small-scale research project was designed by the authors with a view to countering educational underachievement through group work in didactic classrooms in Trinidad and Barbados. The project had two main objectives:

- to develop non-discriminant patterns of within-class learning through social/group-work skills for children; and
- to develop inclusive teaching skills for teachers.

It was felt that the development of non-discriminant patterns of within-class learning through social/group-work skills for children would help children to expand their networks of social support within classrooms, share perspectives and ideas among themselves (promoting cognitive development), communicate more effectively with peers and teachers (a skill for learning and for the labour market), and undertake 'joint' or collaborative actions (related to increased levels of classroom performance). Overall, it is expected that the child-based skills would affect motivation and academic performance (Layne, 2000). It is also assumed that the development of inclusive teaching skills for teachers would help teachers to expand their repertoire of teaching approaches for the inclusion/participation of all pupils in classroom activities. These activities include both plenary-type and student-student discussion, response to teacher questioning, concentration on assigned work, and active involvement.

## **Method**

The project took place over seven months as an action research investigation into the implementation and effects of group working in secondary school classrooms. The project was set in a number of phases that allowed for in-service trainee teachers to develop, introduce, and record aspects of group working in their classrooms. Attention was given to initial baseline measures of pupil attainment, and teacher and pupil attitudes to classroom and group working. The project was keen to ensure teacher and child involvement and 'ownership'; providing broad outlines for development of group working in classrooms but allowing teachers and pupils to develop aspects of their own group working relevant for their classes. The project took place between January and July of one school year.

## **Sample**

The teachers identified to participate in the study were selected from those undertaking in-service training in the postgraduate Diploma in Education (Dip.Ed.) programme of The University of the West Indies (UWI) Campuses at Cave Hill in Barbados and St. Augustine in Trinidad. In Barbados and Trinidad, 12 trainee teachers (5 and 7 from each country respectively) indicated their interest; all specializing in the teaching of social studies in secondary schools. These 12 teachers implemented the relational (group work)

approach in 12 classrooms drawn from 11 schools: 8 co-educational, 2 all-boys', and 1 all-girls' institution. In the Commonwealth Caribbean, approximately 80% of the secondary schools are co-educational.

In Trinidad, as in Barbados, professional training for secondary school teachers is provided by the School of Education, UWI, through the state-sponsored Dip.Ed. In the Dip.Ed., trainee teachers are exposed to theory and practice with respect to a repertoire of teaching/learning strategies, and they choose one of these for further study. Working with one classroom group each, all 12 teachers completed this action research study using the relational group process. Eleven submitted all the data. The total number of pupils beginning the study in Barbados was 118 and 174 in Trinidad, although a complete set of data was missing from four of these pupils.

## **Instruments**

### **1. The relational approach to group working in classrooms**

The approach used in this study draws upon cognitive and social development theories, focuses on the development of supportive relationships, and has been successfully initiated in UK-based studies (see Blatchford, Kutnick, & Galton, 2004; Kutnick & Manson, 1998). This approach is modelled on the development of close relationships within which trust and interpersonal security (from Hall, 1994) establish the bases for further communicative and joint problem-solving relationships. Within this study, in-service trainee teachers were introduced to the approach in their training course, and were provided with a handbook that explained the approach and suggested a sequence of activities that could be initiated in their classrooms. Initial relational activities focused on whole class (socially inclusive) development of trust and communication skills. As trainee teachers became more confident in the use of these skills, they were able to integrate relational group-work activities into their social studies curriculum. Teachers arranged to meet and discuss group work a number of times during the study, and each of the teachers was provided with supportive visits to their classrooms by a research officer while the study was taking place.

### **2. End-of-term examination scores**

Within-class scores are the essential starting point for understanding academic success, for it is within the intensity of classroom interaction that children are provided the encouragement and motivation to succeed through the feedback and responses given to their work. Within-class scores are assigned by individual teachers on the basis of end-of-term examinations in both Trinidad and Barbados. The scores do not account for variations between teachers (in their ability to write 'fair' tests and the difference in subject matter that may be covered in each individual class). Thus, standard deviated scores for each class studied were calculated allowing valid comparisons to be made between schools. Standard deviated scores assume that the scores from each class form a normal distribution for that class and a standard deviation from the class mean can be calculated for each child. While class scores may vary, deviations from the mean remain a consistent and comparable feature between classes.

Within-class test scores were collected from December tests (start of the study) and the following July (end of the study).

### **3. Education Questionnaire**

This was based upon an adaptation of a teacher-based questionnaire of classroom behaviours associated with intellectual, teacher-oriented, and social behaviour of children initially constructed by Osborn & Milbank (1987), with an adaptation by Kutnick (1992). The Education Questionnaire contained nine items of behaviour that related to the current performance and activity of each child in a classroom. The items were presented as semantic differentials for the teacher to rate, and rating was based on a 7-point scale. The nine items asked teachers to rate each child in terms of the following: general knowledge, reactions when confronted with a problem in class, mode of speaking to the teacher, amount of attention paid in class, ability to work in a group, classroom autonomy, reliance on the teacher, popularity with peers, and bossiness with peers. Items were scored individually, but could be summed (for a total score). A factor analysis can be undertaken on the combined items. The Education Questionnaire was administered in January and July.

### **4. Group Work Questionnaire**

This was a 42-item questionnaire developed initially in the UK and validated in the Caribbean to allow children to comment on their feelings toward group work (Blatchford et al., 2004). The items were divided into five areas for comment: working in groups, what happens in your class, getting on with others, about your work, and liking social studies. Each questionnaire item was answered by completing a 5-point Likert scale grid, ranging from 'strongly agree' to 'strongly disagree'. Items were scored by area for comment when there was a high (0.7 or greater) degree of reliability, and by individual item when reliability of area for comment fell below 0.7. Items within areas for comment could also be summed (for a total score) and a factor analysis could be undertaken on all of the items. The Group Work Questionnaire was administered in January and July.

## **Results**

Reporting of the results will take place in three sections:

1. Attainment differences between December and July;
2. Teachers' perceptions on the Education Questionnaire, including factors by which they perceive their pupils' classroom performance/activity in January and July; and
3. Pupils' perceptions of working within groups in their classrooms and how these perceptions change between January and July.

## 1. Attainment Differences between December and July

To facilitate analysis and comparisons through the Results section, academic attainment of pupils will draw, in the main, from the standardized ( $z$ ) scores.  $Z$ -scores are based upon attainment within each classroom. For convenience of analysis, the  $z$ -scores have been divided into four quartiles for each class. The quartiles represent the placement of pupils into four equal-sized bands for each classroom: the lowest attaining in each class are referred to as the ‘lower’ quartile, the next 25% as the ‘lower-mid’ quartile, the next 25% as the ‘higher-mid’ quartile, and the highest 25% as the ‘top’ quartile. Table 1 presents one of the few places in the analyses that draws upon ‘raw’ (or teacher-assigned) scores, and provides means (and standard deviations) typical of the attainment quartiles from the December assessment. Table 1 also provides means (and standard deviations) from the July assessment for children originally placed in the December attainment quartiles, and the amount of change in ‘raw’ scores (between December and July) that was typical for each attainment quartile over the time pupils undertook the relational group working programme within their social studies classes.

**Table 1 Means of ‘Raw’ Within-Class Assessment Scores for December and July Assessments**

	Attainment Scores						Change in Scores		
	December			July					
Standardized Scores for December Quartiles	<i>M</i>	<i>N</i>	<i>SD</i>	<i>M</i>	<i>N</i>	<i>SD</i>	<i>M</i>	<i>N</i>	<i>SD</i>
Lowest quartile	37.3243	74	13.91767	53.0164	61	18.82506	14.5574	61	15.09694
Lower-mid quartile	49.9737	76	13.52132	62.3768	69	16.48538	11.7971	69	11.72300
Higher-mid quartile	60.0615	65	10.82947	69.0714	56	13.66330	8.3214	56	10.61064
Top quartile	71.7013	77	11.79994	73.2192	73	12.52469	1.5479	73	11.03031
<b>Total</b>	<b>54.7432</b>	<b>292</b>	<b>17.98278</b>	<b>64.6757</b>	<b>259</b>	<b>17.20519</b>	<b>8.8069</b>	<b>259</b>	<b>13.12822</b>

Table 1 shows that there were substantive differences in assessed (within-class) test scores for the different quartiles. The ‘top’ quartile in the December attainment test had the highest mean, significantly higher than any of the other quartiles ( $F_{3,288} = 100.647$ ,  $p < 0.0001$ ), with a strong effect size ( $\eta = .512$ ) and significant Scheffe post hoc levels ( $p < 0.001$ ) between the top and other quartiles. Using the same December quartiles as a grouping for analysis, the ‘top’ quartile scored significantly higher than other quartiles in July ( $F_{3,259} = 20.891$ ,  $p < 0.001$ ); even though there were significant Scheffe post hoc differences between the top and other quartiles the effect size was substantially reduced ( $\eta = .197$ ). Table 1 also shows that pupils in the ‘lowest’ quartile made the most significant gains between December and July—most dramatically seen in the comparison

of lowest (average increase of 14.5 percentage points) with top (average increase of 1.5 percentage points) quartiles. The difference in these ‘change’ scores was significant ( $F_{3,259} = 14.536, p < 0.001$ ). Given that the change in means between December and July for each of the quartiles was positive, we can identify that the social inclusion characterized in the relational group work training had a positive effect for all types of children in the classes studied across the two countries, and that the most positive effect was for the children with the greatest underachievement at the start of the group work programme.

Another way of identifying the relative ‘success’ of the children in the lower quartile between December and July is to consider the movement (upwards or downwards) between quartiles. Table 2 displays movement between quartiles, and again shows that children who were in the lowest December quartile made the most (and the highest level of) movement. It should be noted in Table 2 that most children remained within their original quartiles (especially in the top and lower quartiles), and that children in the December top quartile could not move up in the July attainment, nor could the children in the December lower quartile move down in the July attainment. Nevertheless, most significant movement upwards was found in the lowest quartiles.

**Table 2 Movement of Children Between Attainment Quartiles from December to July**

December Attainment Quartiles	Increase/Decrease in July							
	Down 3 quartiles	Down 2 quartiles	Down 1 quartile	Remain in same quartile	Up 1 quartile	Up 2 quartiles	Up 3 quartiles	Missing
Top quartile	7	11	15	39				5
Higher-mid quartile		5	18	21	14			13
Lower-mid quartile			14	27	10	15		9
Lower quartile				37	14	11	1	13

A further point to note (as shown in Table 3) is that the new attainment quartiles created by the standardized scores for the July assessment have higher means for each quartile in July than in December, and this is especially true for the two lowest quartiles. Table 3 indicates that the effect of the group working over the two terms was found for all levels of attainment. In the case of children who were found in the lowest quartile in December and remained in the lowest quartile in July, their classroom scores moved up by an average of 11 percentage points while undertaking the relational group work over the two terms in school.



**Table 3 Comparison of Average ‘Raw’ Scores for Standardized Attainment Quartiles — December and July Within-Class Assessments**

	Attainment Scores					
	December			July		
Standardized Scores (Quartiles)	<i>M</i>	<i>N</i>	<i>SD</i>	<i>M</i>	<i>N</i>	<i>SD</i>
Lowest quartile	37.3243	74	13.91767	48.4697	66	16.87075
Lower-mid quartile	49.9737	76	13.52132	60.1429	70	13.63742
Higher-mid quartile	60.0615	65	10.82947	70.0000	57	8.76682
Top quartile	71.7013	77	11.79994	79.8088	68	9.33978
<b>Total</b>	<b>54.7432</b>	<b>292</b>	<b>17.98278</b>	<b>64.4674</b>	<b>261</b>	<b>17.25721</b>

To further explore for effects on initial low attainment within the context of Barbados and Trinidad, analyses focused on the performance of boys in relation to girls. As previous accounts of education achievement in the two countries (see especially Kutnick et al., 1997) identified that, on average, boys attained at lower rates than girls, the following tables assess the placement of boys within attainment quartiles and how their attainment performance changed after two terms of the relational group work. In terms of general attainment quartiles from the December, classroom-based examination (in all other classes), boys were more likely to underperform than girls. This underperformance was at a significant level ( $X^2(3) = 9.966, p < 0.019$ ), and Table 4 shows that boys were more likely to be found in the lowest quartile of their classes and least likely to be found in the top quartile.

**Table 4 Performance on December Classroom Examinations, by Sex**

Sex		Standardized Scores (Quartiles)				Total
		Lowest quartile	Lower-mid quartile	Higher-mid quartile	Top quartile	
Male	<i>N</i>	42	30	32	26	130
	% within pupil sex	32.3	23.1	24.6	20.0	100.0
Female	<i>N</i>	30	45	33	50	158
	% within pupil sex	19.0	28.5	20.9	31.6	100.0
Total	<i>N</i>	72	75	65	76	288
	% within pupil sex	25.0	26.0	22.6	26.4	100.0

Another way of describing the initial underperformance of male pupils (relative to females) is the comparison of average z-scores for males and females. Male average score was below the mean for all pupils at -0.1780 (SD = 0.96821), while female average

scores were above the mean at 0.1498 (SD = 0.9620). This difference in z-scores between males and females was not consistent among all of the schools (classes), although the difference between male and female scores was significant ( $F_{1,289} = 8.333, p < 0.004$ ). Change in attainment over the two terms of relational group working appeared to affect boys and girls equally. Aside from the general effect that lower attaining pupils improved to a greater extent in this time period (see Tables 1–3), there was no significant difference in the improvement of boys versus girls in any of the December-based quartiles (Table 5). In this table, girls improved in their attainment in the lower quartiles slightly more than boys, and this was reversed in the higher attainment quartiles.

**Table 5 Means for Change in Attainment Between December and July, by Sex, Within December Standardized Attainment Quartiles**

<b>Sex</b>	<b>Standardized Scores for December (Quartiles)</b>	<i>M</i>	<i>SD</i>	<i>N</i>
<b>Male</b>	Lowest quartile	14.1389	17.34878	36
	Lower-mid quartile	10.3077	13.65802	26
	Higher-mid quartile	10.7692	9.42468	26
	Top quartile	1.5909	12.27719	22
	<b>Total</b>	<b>9.9273</b>	<b>14.45443</b>	<b>110</b>
<b>Female</b>	Lowest quartile	15.6957	11.44328	23
	Lower-mid quartile	12.8571	10.52656	42
	Higher-mid quartile	6.2000	11.26606	30
	Top quartile	1.5600	10.68312	50
	<b>Total</b>	<b>8.0345</b>	<b>12.13948</b>	<b>145</b>
<b>Total</b>	Lowest quartile	14.7458	15.22769	59
	Lower-mid quartile	11.8824	11.78860	68
	Higher-mid quartile	8.3214	10.61064	56
	Top quartile	1.5694	11.10618	72
	<b>Total</b>	<b>8.8510</b>	<b>13.19424</b>	<b>255</b>

**2. Teachers’ perceptions on the Education Questionnaire, including factors by which they perceive their pupils’ classroom performance/activity in January and July**

- (a) *Factors by which teachers perceive their pupils’ classroom performance/activity in January and July*

Although this semantic differential-based questionnaire asked teachers to comment on each child in her/his class, some initial and more general points can be made before exploring the relationship between teachers’ ratings of their pupils and their (pupils’) attainment positions. An initial factor analysis was undertaken on the nine semantic differential measures. This analysis identified two factors that had sufficiently high reliability for use in this study (see Table 6). Factor 1 associated General Knowledge of pupils with their ability to Pay Attention in class and to Work in a Group. Factor 2 was associated negatively: pupils Dependent on the Teacher, do not get on well with peers (Bossy), and having poor General Knowledge.

**Table 6 Factors Identified in Education Questionnaire—January**

<b>Factor</b>	<b>Eigen Value</b>	<b>Variance</b>	<b>Cronbach Alpha</b>	<b>Characteristics</b>
1	4.578	41.621%	0.892	General Knowledge Pay Attention Demands of Group Working
2	1.289	11.717%	0.675	Dependence on Teacher (-) Bossy with Peers (-) General Knowledge (-)

Factor 1 was strongly associated with standardized performance scores from the December examination (0.746,  $p < 0.001$ ), while Factor 2 was less strong (0.140,  $p < 0.05$ ). Table 7 identifies that high attaining pupils scored most highly on Factor 1 and there was no significant sex difference across attainment groups. There was a significant difference by attainment for Factor 2, with the lowest attainment quartile scoring the lowest (having least general knowledge, poorest peer relations, and dependence on teacher); there was no sex difference in Factor 2.

Based on the July end-of-year administration of the Education Questionnaire, a new factor analysis was undertaken, noting that any difference in factors compared to the January administration shows how teachers’ perceptions of their pupils changed over the two terms of implementing group work practices in their classrooms. In this analysis, again, only two factors had a sufficient degree of reliability to proceed with analysis. Table 8 describes each of the factors and the questionnaire items that compose each factor.

**Table 7 Standardized Attainment Levels by Education Questionnaire Factors 1 and 2—January**

Factor	Means by Quartile Attainment Level	Number of Pupils	F score
1	Lowest = 12.7000 (4.43422)	67	F (3, 266) = 15.015 P<0.0001, eta = 0.145
	Lower-mid = 14.6429 (4.29370)	70	
	Higher-mid = 15.4412 (3.53396)	61	
	Top = 17.2361 (3.38802)	72	
2	Lowest = 11.5224 (3.66539)	67	F (3,267) = 12.711. P<0.0001, eta = 0.125
	Lower-mid = 12.4225 (3.73272)	71	
	Higher-mid = 14.0656 (3.02142)	61	
	Top = 14.5694 (2.57193)	72	

**Table 8 Factors Identified in Education Questionnaire—July**

Factor	Eigen Value	Variance	Cronbach Alpha	Characteristics
1	3.457	31.428%	0.856	General Knowledge (-) Pay Attention (-) Concentration (-)
2	2.611	23.733%	0.761	General Knowledge Demands of Group Work Popular with Peers

These two factors show distinct differences from the factors identified in the January administration of the Education Questionnaire. In the July administration, Factor 1 was negatively loaded, and associated poor general knowledge with poor concentration and attention in class. Factor 2 was positive, and associated good general knowledge with the ability to work well in a group and popularity with peers. At the end of the school year, teachers associated knowledge (classroom performance in general terms) with good use of social skills (good peer relations and ability to work with/in a classroom group). In January, poor social skills (bossiness with peers) were associated with poor general knowledge, and, in July, poor knowledge was associated with lack of attention and concentration. Again, each of the factors was significantly associated with school achievement (Factor 1 = 0.584,  $p < 0.001$ , and Factor 2 = 0.845,  $p < 0.0001$ ).

Examination as to how the attainment quartiles scored with regard to the two July factors shows that pupils in the lowest attaining (December) quartile still scored lowest on Factor 1 (Table 9). In Factor 1, there was a significant difference for attainment ( $F 3,259 = 21.893$ ,  $p < 0.001$ ,  $\eta^2 = 0.202$ ) and for sex ( $F 1,259 = 4.181$ ,  $p < 0.042$ ,  $\eta^2 = 0.016$ ). Within this factor, though, it was the low quartile girls who scored the worst.

**Table 9 Education Questionnaire, July—Factor 1 by Attainment and Sex**

<b>December Quartiles</b>	<b>Pupil Sex</b>	<i>N</i>	<i>M</i>	<i>SD</i>
Lowest quartile	<b>Male</b>	42	9.60	3.16
	<b>Female</b>	30	7.61	2.28
Lower-mid quartile	<b>Male</b>	30	10.27	2.71
	<b>Female</b>	45	10.57	2.35
Higher-mid quartile	<b>Male</b>	32	11.63	2.15
	<b>Female</b>	33	10.41	2.50
Top quartile	<b>Male</b>	26	11.86	2.21
	<b>Female</b>	50	12.04	1.98

With regard to Factor 2, the December lower attaining pupils again scored lowest (Table 10), and among the lowest quartile it was girls that scored the lowest. There was only a significant difference for attainment ( $F_{3,257} = 12.259$ ,  $p < 0.001$ ,  $\eta^2 = 0.125$ ) and no significant difference explained by sex of pupils.

**Table 10 Education Questionnaire, July—Factor 2 by Attainment and Sex**

<b>December Quartiles</b>	<b>Pupil Sex</b>	<i>N</i>	<i>M</i>	<i>SD</i>
Lowest quartile	<b>Male</b>	42	14.91	3.68
	<b>Female</b>	30	12.68	3.39
Lower-mid quartile	<b>Male</b>	30	14.77	3.32
	<b>Female</b>	45	15.79	3.31
Higher-mid quartile	<b>Male</b>	32	16.19	3.22
	<b>Female</b>	33	16.00	3.33
Top quartile	<b>Male</b>	26	17.05	3.09
	<b>Female</b>	50	17.28	2.56

Observing and comparing the two positive factors from the two administrations of the Education Questionnaire (Factor 1 in Table 7 (January) with Factor 2 in Table 10 (July)) show that underattaining boys were more likely to be perceived by the teacher to have progressed more than girls. It should be noted that the positive factors in January and July were composed of slightly different questionnaire items (general knowledge and ability to work in a group remained the same, but the July teacher perception changes included popularity with peers rather than pay attention). Lowest quartile boys increased an

average of two points whereas girls remained the same. In the top quartile, pupils scored nearly the same in both January and July administrations of the questionnaire.

(b) *Teachers' perceptions on pupil performance on the Education Questionnaire in January and July, individual items*

Particular patterns of performance and classroom activity were found when attainment quartiles were related to individual Education Questionnaire items from the January administration. Similar to the broad factors identified above, Table 11 identifies that high attaining pupils were generally perceived to have good General Knowledge, Pay Attention to Classwork, Work Well in Groups, and were Popular with Peers. At the other extreme, low attaining pupils had poor General Knowledge, did not Pay Attention, did not participate well in Group Work, were unlikely to be Popular with Peers, and did not associate well with others when Working on their Own. High attaining pupils were knowledgeable, focused, and able to 'get on' with peers. Low attaining pupils generally lacked knowledge and classroom skills and were 'asocial'.

**Table 11 Standardized Attainment Levels by Individual Education Questionnaire Items—January**

		December Quartiles				
		Lowest	Lower-mid	Higher-mid	Top	Total
Student's general knowledge	<i>M</i>	3.8060	4.5352	5.1967	5.9306	4.8745
	<i>N</i>	67	71	61	72	271
	<i>SD</i>	1.59771	1.61980	1.44706	1.11742	1.65298
When confronted with a problem	<i>M</i>	5.0299	5.2394	5.2131	5.6389	5.2878
	<i>N</i>	67	71	61	72	271
	<i>SD</i>	1.73179	1.60770	1.71381	1.48519	1.63927
When talking about classwork	<i>M</i>	3.9701	4.0141	3.8852	3.0972	3.7306
	<i>N</i>	67	71	61	72	271
	<i>SD</i>	2.07416	1.94564	1.72335	1.71291	1.90032
Pay attention in class	<i>M</i>	4.1642	5.0000	5.1803	5.7500	5.0332
	<i>N</i>	67	71	61	72	271
	<i>SD</i>	1.76324	1.54919	1.34794	1.37123	1.61555
Demands of working in a group	<i>M</i>	4.9104	5.0429	5.3934	5.5556	5.2259
	<i>N</i>	67	70	61	72	270
	<i>SD</i>	1.63976	1.60105	1.36966	1.41311	1.52698
Do things on own	<i>M</i>	3.9104	3.5857	3.0164	2.8889	3.3519
	<i>N</i>	67	70	61	72	270
	<i>SD</i>	1.80682	1.74865	1.46619	1.68302	1.72837
Dependent on teacher	<i>M</i>	2.9701	3.5070	3.9344	3.6667	3.5129
	<i>N</i>	67	71	61	72	271
	<i>SD</i>	1.88270	2.06932	1.86072	2.04182	1.99044
Popular with peers	<i>M</i>	4.2239	4.4789	4.7213	4.9167	4.5867
	<i>N</i>	67	71	61	72	271
	<i>SD</i>	1.81593	1.77168	1.57195	1.50819	1.68403
Bossy with peers	<i>M</i>	4.7463	4.3803	4.9344	4.9722	4.7528
	<i>N</i>	67	71	61	72	271
	<i>SD</i>	2.00260	2.12715	1.67201	2.02778	1.97806

Focusing on change from January to July for each of the individual questions in the education questionnaire (see Table 12), the following can be described:

1. While general knowledge showed no significant difference in change for attainment or sex, the change scores show that lower attaining pupils made more positive changes than higher attaining pupils, and that boys made greater gains than girls.
2. When confronted with a problem in class showed no significant attainment or sex differences, but this column shows that girls improved the most over the two terms and low attaining males showed a lowering in scores.
3. Changes in classroom talk are more difficult to interpret, given the structure of the questionnaire. Mid to high attaining males became more reluctant to talk in class while females (generally) were more conversational. There was no significant difference in this item due to attainment, but there was a significant difference due to sex ( $F_{1,253} = 4.594, p < 0.033, \eta^2 = 0.018$ ).
4. Changes in paying attention in class showed no significant differences by levels of attainment or sex, but the most positive changes were found in the lowest attainment quartile.
5. Changes in coping with the demands of working in a group again showed no significant differences by attainment or sex, but the most significant movement was in the lower attainment quartiles.
6. Changes in doing things on their own again showed no significant difference for attainment or sex, although the biggest positive movement was in the high-mid attainment group, followed by the lowest quartile.
7. Changes in dependence on the teacher (or withdrawal from the teacher) showed a significant difference for attainment ( $F_{3,244} = 4.758, p < 0.003, \eta^2 = 0.055$ ), with the lowest attaining pupils (especially boys) making the most positive movement and the highest attaining pupils showing a negative movement.
8. Changes in popularity with peers showed no significant differences for attainment or sex. All attainment quartiles showed positive movement although the lower-mid quartile of males showed a negative movement.
9. Finally, changes in bossiness with peers did not show significant differences for attainment quartiles or sex, although within the lower quartiles girls were more likely to change than boys, and in the higher quartiles this was reversed. In all quartiles (but the highest) there was an average positive change.

Another way of identifying teachers' perception of change in their pupils on the Education Questionnaire between January and July is to correlate the change in attainment scores with change scores on questionnaire items. Positive and significant correlations identify that those pupils with the largest positive change in attainment will have a similar change on the individual Education Questionnaire items. Table 13 identifies that all but one of the individual questions showed a positive correlation. Significant correlations were found for the following items: 'general knowledge,' 'when confronted with a problem,' 'paying attention,' 'peer popularity,' and for the total change score. These correlations indicate that pupils (especially the lower attaining pupils) who showed attainment change were also perceived to develop positively over a range of classroom and social indicators.



**Table 12 Change in Education Questionnaire items\***

December Quartiles	Pupil Sex	N	Gen. Know. Mean	Conf. Prob. Mean	Talk Classwk. Mean	Pay Attn. Mean	Work in Group Mean	Work on Own Mean	Teacher Ind/Dep. Mean	Peer Popular. Mean	Bossy w Peers Mean
Lowest quartile	<b>Male</b>	34	.3529	-.1765	-.1471	.2941	.2353	.0606	1.3235	.3235	.2353
	<b>Female</b>	26	.3077	.4231	-.5769	.6154	.5385	.2692	.6538	.1923	.1923
	<b>Total</b>	60	.3333	.0833	-.3333	.4333	.3667	.1525	1.0333	.2667	.2167
Lower-mid quartile	<b>Male</b>	21	.6667	-.3810	-.8095	-.0952	-.2000	.0952	1.0000	-.0952	.1905
	<b>Female</b>	44	.4091	.3182	.0909	.5455	.7727	.0698	.2955	.6279	1.0000
	<b>Total</b>	65	.4923	.0923	-.2000	.3385	.4688	.0781	.5231	.3906	.7385
Higher-mid quartile	<b>Male</b>	27	.4444	.1481	-.4444	.8889	.2963	.2963	-1.2593	.2963	.3704
	<b>Female</b>	29	-.0345	.0000	.4828	-.2414	.0345	1.1071	1.0690	.0345	-.0690
	<b>Total</b>	56	.1964	.0714	.0357	.3036	.1607	.7091	-.0536	.1607	.1429
Top quartile	<b>Male</b>	22	.1818	.2273	-.5909	.5000	.3182	-.1818	-.1818	.4762	.6667
	<b>Female</b>	49	-.0204	.0204	.4583	.1429	.2857	.2041	-.4694	.4490	-.4490
	<b>Total</b>	71	.0423	.0845	.1286	.2535	.2958	.0845	-.3803	.4571	-.1143
Total	<b>Male</b>	104	.4038	-.0481	-.4519	.4135	.1845	.0777	.2692	.2621	.3495
	<b>Female</b>	148	.1622	.1757	.1701	.2703	.4257	.3493	.2568	.3741	.1689
	<b>Total</b>	252	.2619	.0833	-.0876	.3294	.3267	.2369	.2619	.3280	.2430

*Note:*

\*Standard deviations of item change scores are not included in this table. Within each cell there was little variation of the standard deviations for males and females.

**Table 13 Correlations Between Change in Attainment and Change in Individual and Total Items on the Education Questionnaire**

<b>Change in Education Questionnaire Items</b>	<b>Correlation with Change in Attainment Scores</b>	<b>Significance</b>	<b>N</b>
Student's General Knowledge	.237(**)	.001	236
When Confronted with a Problem	.169(**)	.009	236
When Talking about Classwork	-.082	.212	236
Pay attention in Class	.224(**)	.001	236
Demands of Working in a Group	.141(*)	.031	236
Do Things on Own	-.060	.359	233
Dependent on Teacher	.014	.836	236
Popular with Peers	.108	.101	234
Bossy with Peers	.071	.276	235
Total of Change Scores	.156(*)	.019	229

*Notes:*

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

A similar set of correlations (not presented here) were run to ascertain the relationship between attainment quartile from December to each of the education questionnaire items. Significant negative correlations identified that lower quartile pupils showed positive change. These correlations showed: General Knowledge (-.130,  $p < 0.035$ ), Dependence on the Teacher (-.241,  $p < 0.001$ ), and Total Change (-.124,  $p < 0.047$ ). The correlations provide further indication that teachers' perception of pupils' general knowledge and general classroom performance improved, especially among the lowest attainers, after undergoing the relational group work training in their social studies classes.

### 3. Pupils' Attitudes to Group Work—January and July

The questionnaire's five groupings of questions were analysed separately, either on a grouped basis (if there was sufficiently high reliability among the questions) or as separate questions within the grouping. In the first grouping, questions centred on group working as a context to share learning experiences, classroom involvement, and participation. A combination of 9 of the 10 original questions showed a high degree of reliability ( $\alpha = 0.734$ ), indicating a consistency of attitude towards group working by pupils. The second grouping described 'what is happening in your classroom,' focusing on whether classroom organization was inclusive for all pupils: turn-taking, sensitivity to the needs of others, discussion without threats or argument. The six questions in this grouping showed a high reliability ( $\alpha = 0.758$ ). The third grouping focused on 'getting on with others,' but had very poor reliability among the items and analyses could only proceed with individual questions. The fourth grouping was 'about your work,' and concerned working hard to do well in school, working for further education, and pleasing parents; this grouping of questions had a high reliability ( $\alpha = 0.770$ ). A fifth grouping focused solely on social studies, and questioned current attitudes to the subject. There was a high level of reliability in this grouping of questions ( $\alpha = 0.800$ ).

A comparison of levels of pupil attainment and the above groupings with high reliability (Table 14) identified that there were no significant statistical differences between December attainment quartiles in attitudes towards working in groups, descriptions of what is happening in classrooms, and social studies. The average scores identified that all attainment quartiles agreed that working in groups was beneficial, but were unsure of the effect of their classroom organization or liking social studies. There was a relatively small but significant difference in descriptions of own work—where high and middle attainment quartiles agreed about the success of their work and low attaining pupils were unsure of their success.

**Table 14 Average Scores for December Attainment Level by (Grouped) Questions Concerning Work in Classrooms**

	<b>Work in Groups</b>	<b>What Happens in Class</b>	<b>Rating Your Work</b>	<b>Social Studies</b>
<b>December Quartiles</b>				
Top	4.1444 (.46350)	2.9234 (.77744)	4.0831 (.55006)	3.1804 (.85290)
High-mid	4.2612 (.46171)	3.0528 (.79042)	4.0831 (.45982)	3.2853 (.72189)
Low-mid	4.2144 (.57836)	3.1509 (.74951)	3.9597 (.52532)	3.0563 (.88548)
Lowest	4.1781 (.50028)	3.0343 (.71443)	3.7866 (.66147)	3.0564 (.78962)
<i>F</i>	3, 262 = 0.618, N.S.	3, 272 = 1.119, N.S.	3, 265 = 4.221, $p < 0.006$	3, 264 = 1.149, N.S.
Eta	0.007	0.012	0.046	0.013

The 'getting on with others' questions were analysed separately, as shown in Table 15. This table identifies that there were few differences between quartiles of attainment. Exceptions to this were found with regard to keeping quiet about own ideas and having really close friends; in these exceptions high attaining pupils were more likely to disagree with keeping quiet while low attaining pupils were more likely to agree that they had close friends. Average scores for each of the 10 questions of this grouping showed many examples of insecurity among the pupils: they were unsure about working with those they didn't like, sharing ideas with others, feeling that others were 'winding' them up, showing their intelligence, and their own popularity. Pupils agreed with working with friends, asserting their own point of view, and having close friends. They disagreed with following others.

**Table 15 Getting on with Others Questions by December Attainment Levels**

	<i>Df</i>	<i>F</i>	<i>Sig.</i>	<b>Mean for Group</b>
If I don't like someone, I won't work with them	2, 284	.698	.499	2.9018
I like working with friends all of the time	2, 284	.358	.699	3.991
I like to make my point of view	2, 285	.464	.630	4.3462
I have lots of ideas to share with others	2, 281	.402	.670	3.9542
Its 'cool' not to be too smart	2, 270	1.413	.245	2.2454
Others are always winding me up	2, 275	.048	.953	2.9281
I keep quiet about my own ideas	2, 282	3.231	.041	2.3965
I have some really close friends	2, 283	3.033	.050	4.0245
I usually follow the others and do what they do	2, 283	.838	.433	1.9965
I would say that I am a popular person	2, 284	.119	.887	3.2190

A factor analysis was undertaken on the January group work questionnaire, revealing three factors that could be defined with a high degree of reliability (Table 16). Factor 1 combined positive concerns about group working and sharing in class with learner self-confidence and a general liking for social studies as a subject. Factor 2 negatively combined liking for social studies (as a subject) and its future use. Factor 3 negatively combined classroom and inter-pupil sensitivity.

**Table 16 Factors Identified in Pupils’ Group Work Questionnaire—January**

<b>Factor</b>	<b>Eigen Value</b>	<b>Variance</b>	<b>Cronbach Alpha</b>	<b>Characteristics</b>
1	6.330	15.072%	0.767	I like to share what I know with others Groups encourage you to work hard Group work is fun To get a job done in a group you need to work hard I like to make my point of view known I have lots of ideas to share with others I am pretty confident about doing the tasks that I am set I try and learn as much as I can I would say that I am a really hard worker I like doing social studies projects Learning social studies makes me think better
2	2.2972	7.075%	0.802	I like social studies more than any other school subject (–) I should like to get a job where I can use social studies (–) Learning social studies makes me think better (–) I should like to be a social scientist (–)
3	2.477	5.897%	0.733	We take turns when talking in class (–) We are sensitive to the needs of others (–) We discuss things and do not argue in class (–) We get on well together in class (–) We are well organised in class (–)

When each of the above factors was analysed in relation to December attainment quartiles, no significant differences were found. Factor 1 had an average score of 4, indicating general levels of agreement for all attainment levels, but there was a significant sex difference ( $F_{1,255} = 13.755, p < 0.001$ ) with girls scoring an average 4.5 and boys 4.2. There were no attainment or sex differences found for Factor 2, and the average score indicated ‘unsure’ as a general response. Factor 3 showed no attainment or sex differences, and average scores indicated ‘unsure’ as a general response.

(a) In the July administration of the Group Work Questionnaire, there were few differences found by attainment level, but some differences were explained by sex. Table 17 displays results by ANOVA for the four groupings of questions that had a high alpha level of reliability (Work in Groups = 0.687; What happens in Class = 0.746; Rating your Work = 0.794; and Social Studies = 0.794).

**Table 17 Group Work Questionnaire, July—Main Groupings of Questions**

	<b>Work in Groups</b>	<b>What Happens in Class</b>	<b>Rating Your Work</b>	<b>Social Studies</b>
Differences Due to December Attainment	N.S.	N.S.	N.S.	N.S.
Differences Due to Sex	F 1, 226 = 4.176, p<0.042, Eta = 0.018	N.S.	N.S.	N.S.
Average Score	4.1769	3.2234	4.0678	3.2062

In the questions concerned with getting on with others, there were no sex differences and three attainment differences. Attainment differences were found for: ‘If I don’t like someone, I won’t work with them’ (F 3,239 = 3.158, p<0.025, with the lower-mid and lower attainment quartiles scoring highest); ‘I keep quiet about my own ideas’ (F 3,238 = 3.656, p<0.013, with the lower and lower-mid attainment quartiles scoring highest); and ‘I usually follow others and do what they do’ (F 3, 236 = 5.464, p<0.001, with the lower and lower-mid quartiles scoring highest).

(b) A further factor analysis was undertaken on the July questionnaire. The main factors that were identified (nearly) replicated the January factors, and no significant attainment or sex differences were found. (Due to the high degree of similarity in the January and July main factors, an additional table presenting the July factors and levels of reliability was therefore deemed unnecessary.)

(c) ANOVAs were run on change scores for each grouping of answers. Using the December attainment quartiles and sex as variables affecting general changes in perceptions of working in groups, there was no significant difference in attainment, but a difference in sex (F 1,205 = 7.318, p<0.007). Males improved their scores and females decreased in scores (Table 18).

Change scores for ‘what happens in your class’ showed a general improvement in attitudes by an average of 1.0. There were no significant differences found due to December attainment quartiles or sex of pupils. A brief overview of the means for attainment level and sex found that most progress was made in the lowest and highest attainment groups, and improvement in attitude was more likely to be associated with males than females.

**Table 18 Change Scores for ‘Working in Groups’ Questions by Attainment and Sex**

<b>December Quartiles</b>	<b>Pupil Sex</b>	<i>M</i>	<i>SD</i>	<i>N</i>
Lowest quartile	<b>Male</b>	.1000	3.07773	30
	<b>Female</b>	-2.1818	4.71711	22
	<b>Total</b>	-.8654	3.98049	52
Lower-mid quartile	<b>Male</b>	2.5294	3.76028	17
	<b>Female</b>	-1.3871	2.90606	31
	<b>Total</b>	.0000	3.71312	48
Higher-mid quartile	<b>Male</b>	-.9130	4.48141	23
	<b>Female</b>	-.1250	5.00706	24
	<b>Total</b>	-.5106	4.72216	47
Top quartile	<b>Male</b>	1.6111	4.38096	18
	<b>Female</b>	.4375	4.83298	48
	<b>Total</b>	.7576	4.71025	66
<b>Total</b>	<b>Male</b>	<b>.6136</b>	<b>4.02701</b>	<b>88</b>
	<b>Female</b>	<b>-.5840</b>	<b>4.51375</b>	<b>125</b>
	<b>Total</b>	<b>-.0892</b>	<b>4.34986</b>	<b>213</b>

Changes in ‘getting on with others’ did not have sufficiently high reliability, and the 10 individual questions were analysed for change by December attainment and sex. There were no significant differences in change for any of the 10 questions accountable by attainment or sex. The means of the change scores did show the following: decreases in the questions ‘If I don’t like someone I won’t work with them’ (-.1083), ‘I like working with friends all of the time’ (-.1967), ‘Others are always winding me up’ (-.0601), ‘I keep quiet about my own ideas’ (-.1423), and ‘I have some really close friends’ (-.0544); and increases in the questions ‘I like to make my own point of view; (.0851), ‘I have lots of ideas to share’ (.0591), ‘I am a popular person’ (.1286), as well as increases in ‘I usually follow the others and do what they do’ (.0588) and ‘It’s cool not to be too smart’ (.2096). Most of the changes showed greater sensitivity to working with others, not letting friendship dominate classroom working, and asserting points of view.

Change scores for ‘about your work’ showed a general improvement in attitudes by an average of 0.9604. There were no significant differences found due to December attainment quartile or sex. Again, though, means for the various groupings showed that most improvement in attitude took place with lowest and highest attainers, and that males were more likely to show improvement than females.

Change scores in attitudes to ‘about social studies’ did not show a significant difference for attainment quartile, although there was a significant difference for sex ( $F_{1,214} = 4.763$ ,  $p < 0.030$ ). The average change and sex differences are displayed in Table 19, where the means for these groupings show that the highest levels of improvement were found in the lowest attaining males, followed by the highest attaining males. Mid attaining males and low attaining females showed the least improvement.

**Table 19 Means for Change in ‘Attitude to Social Studies’ by Attainment and Sex**

<b>December Quartiles</b>	<b>Pupil Sex</b>	<i>M</i>	<i>SD</i>	<i>N</i>
Lowest quartile	<b>Male</b>	1.4333	3.87462	30
	<b>Female</b>	-1.5455	3.48776	22
	<b>Total</b>	.1731	3.96910	52
Lower-mid quartile	<b>Male</b>	1.1053	3.84267	19
	<b>Female</b>	-.0312	3.85616	32
	<b>Total</b>	.3922	3.85268	51
Higher-mid quartile	<b>Male</b>	-1.5417	4.04302	24
	<b>Female</b>	-.3704	3.27165	27
	<b>Total</b>	-.9216	3.66520	51
Top quartile	<b>Male</b>	1.6000	4.61576	20
	<b>Female</b>	-.1875	3.98217	48
	<b>Total</b>	.3382	4.22364	68
<b>Total</b>	<b>Male</b>	<b>.6344</b>	<b>4.21897</b>	<b>93</b>
	<b>Female</b>	<b>-.4186</b>	<b>3.72428</b>	<b>129</b>
	<b>Total</b>	<b>.0225</b>	<b>3.96414</b>	<b>222</b>

### Summary and Discussion

This study looked at the impact of relational groups as a teaching/learning strategy within secondary schools in Barbados and Trinidad. As previously stated, the two aims were: 1) to develop non-discriminant patterns of within-class learning through relational group work, and 2) to develop inclusive teaching skills for teachers. In spite of the limited time available, initial results are encouraging, especially among males whose school results have been the subject of much concern in the Caribbean and worldwide. In general, the findings indicate that all groups—teachers and pupils (males and females; high and low attaining)—benefited from the relational group process in various ways.

#### Attainment

Pupil attainment scores showed significant overall upward movement for males and females relative to their previous scores. This finding characterized analyses using standardized scores and mean raw scores. Summarized findings revealed that while the upper quartile pupils had the smallest mean level of improvement in attainment (+1.5%), those in the lowest attainment quartile, dominated by males, made the most significant mean increase (+14.5%). Females in this lowest quartile, however, had the greater change (+15.7%) in mean level of attainment over males (+14%). On the other hand, males, whose previous attainment scores placed them in the high-middle quartile improved their mean raw scores by +10.76%. Similarly placed females only managed a mean change of +6.2%. Pupils who began in the lowest attainment quartile and who remained there had an 11% increase in their mean raw scores.



Correspondingly, results showed a substantial reduction in difference between the means for the top and lowest quartiles. Evidence of the significance of the closing of this attainment gap is replicated in the effect size based on differences between top and other quartiles (December:  $\eta = .512$ ; July:  $\eta = .197$ ). Confirming this significance even further is the observation that some 26 pupils who began with scores in the lowest quartile increased their attainment scores and moved up one (14 pupils), two (11 pupils), or three (1 pupil) quartiles. On the other hand, among those beginning in the top attainment quartile (77 pupils), some pupils shifted down one (15 pupils), two (11 pupils), or three (7 pupils) quartiles even as their raw scores increased. These attainment results identify a level of untapped classroom potential among low attaining pupils generally (and high-middle quartile males specifically) in Barbados and Trinidad.

Given the increase in mean scores and noting that the achievement gap was reduced between upper and lower attaining pupils, one may assume that all pupils were afforded the opportunity to improve their classroom performance through the relational group process. One teacher involved in the study was very impressed with the level of improved attainment in her class, noting: "Overall results for Terms 2 and 3 showed a steady improvement in 90% of pupils, with the remaining 10% exhibiting negligible declines." The achievement gap between males and females was not significantly reduced however. One may take the view that looking at the achievement gap between males and females is to take too symptomatic a focus; one that ignores the fact that the goal of education is to encourage all pupils to reach their potential. One may also argue that focusing on male underachievement creates a new type of stereotyping and a new anxiety and vulnerability, when what pupils need are teachers skilled at establishing positive encouraging classroom relationships (Scherer, 2004).

In the attempt to explain overall improvements in pupils' attainment, one participating teacher believed that explanations with respect to motivation might lie in the changed teaching/learning environment. Her view was that "They [pupils] had more opportunity to mentally massage the information." This could be interpreted to mean that the relational group process facilitated increased mental interaction via a supportive environment of group analysis and elaboration, which, in turn, improved understanding and remembering. This support fits the aim of the relational group process, which, as a teaching strategy, is premised on the theory that the psychosocial climate of the classroom is a major facilitating factor in pupil classroom learning (Sylwester, 1994). The classroom atmosphere created must be open, that is, a pupil needs to feel equally free to be right or wrong and, therefore, free to be correct or to make a mistake. In various ways, ownership of the learning is given back to the pupil. Relational group work is designed to encourage a network of social support processes that build trust and cooperation among pupils (Jules, 1992). It focuses on the human skills and capabilities that have been found to promote positive interaction and outcomes in learning situations. The developers of this teaching/learning strategy recognize the natural human tendency to gregariousness and the related need for belonging. These operating tenets help to create in the classroom, a learning atmosphere characterized by feelings of security, support, equity, and fair play, and the reduction or absence of fear and exclusion.

Aronson (2004, p. 16) reminds us that the human intellect is very fragile, especially in the face of anxiety “it can rise or fall depending on the social context.” This sentiment is supported by a teacher who noted:

Group work helped to create new alliances both academic and social. It gave the pupils the opportunity to put forward and discuss their opinions and learn from each other. It enabled them to be self reliant, thus, depending less on the teacher. Ultimately it has contributed to an improved academic performance as they relinquish some of their inhibitions, like shyness, and become more assertive. Pupils who did not get a chance to speak in a whole class situation became more vocal in a small group setting. They also displayed some degree of confidence during small group discussion.

‘Ownership’ of their learning and participation may be part of the answer to what motivated the shift in attainment. Participation in classroom activities has been closely linked to academic success and improved achievement, especially with regard to formative assessment (Black & Wiliam, 1998). The relational group approach as a learning strategy encouraged discussion; taking turns; and sharing of ideas, facts, and knowledge—first in small groups and then more generally. Pupils were free to talk to each other in their small groups and critique ideas. ‘On task’ participation was increased through the interaction the small groups allowed the pupils. Each small group became a learning community in which each learner was a resource to the others. There was also room not only for repetition but also for elaboration and higher level self and other questioning as well. As noted by T, a previously unconcerned male pupil:

The group work helped me to learn more because some would walk right by something that should be taken note of – when others would spot it immediately.

A number of other pupils made similar comments. Relational group work therefore encouraged these pupils, especially the adolescent boys and low attaining pupils, to want to participate in the learning process (seemingly) without the fear of shame so common in traditional classrooms.

While improvement in attainment was a general finding, it was not universal. Particularly, low attaining males did not achieve on a level similar to the low attaining females. Further explanations may be drawn from the schooling context of these pupils. In the Caribbean secondary school situation, the percentage of female teachers is high. In Trinidad, for instance, it is overall 59.2% but may reach as high as 84% in some of the single-sex schools (National Institute of Higher Education, Research, Science and Technology [NIHERST], 2002). The apparent feminization of the profession and, by extension, education has been highlighted as an impacting factor on males in earlier Caribbean studies (Jules & Kutnick, 1997). On a wider scale, improved attainment for any child has been found to depend on a network of in-school and out-of-school factors. Barton (2004, p. 10), for instance, lists factors as: (a) before and beyond school (birthweight, nutrition, reading with parents, television watching, parent availability and participation, student mobility); and (b) in school (rigour of curriculum, teacher experience and attendance, class size, school safety, and technology assisted instruction). It was also noted that high levels of improvement in attainment did not characterize the

highest quartile. Part of the explanation for lower levels of improvement is provided by a ‘ceiling’ effect characteristic of within-class grading. Another partial explanation is provided by a teacher who stated:

Boys and girls in the top quartiles will always do well. They are self-driven; that is what motivates them. Boys in the upper middle quartiles are equally intelligent but their motivation is highly influenced by what is happening in the classroom. During this group work process, the classroom was more theirs than before and the classroom is their true learning medium. They don’t do schoolwork when they leave here; they don’t re-read or revise..... They felt confident and secure and they are intelligent enough to adapt and respond to change very comfortably when it suits them. They don’t however leave their adolescent boyish roughness nor their male egos and the accompanying arrogance with respect to their intelligence at the door when they come to class. Girls work harder because they believe they have an unequal social start; they have more to prove, more to lose....

### **Teacher Perception**

Another facet of critically impacting processes on pupil attainment is the role of teacher perception (Landsman, 2004; Rogers, 1982; Rosenthal & Jacobson, 1968). Poorly performing pupils have been perceived by teachers as having a host of traits unhelpful to learning and, in time, may become self-fulfilling (Landsman, 2004; Rosenthal & Jacobson, 1968). Teachers who participated in this study were no different. At the start of the process, they looked at low attainment in their pupils, both males and females, as a type of chronic learning problem and associated that lack of “good” general knowledge (“knowing little and understanding less”) with ‘dependence on the teacher’ and ‘bossiness’, or as exhibiting ‘poor peer relationships’. By July, however, teachers were beginning to speak differently. They associated learning, that is developing good general knowledge, with relational terms; that is, learning was allied to autonomy, working well in groups and getting on with others, and exchanging ideas, rather than only as linked to paying attention to, and concentrating on, the teacher. One of the teachers reflected on pupil-pupil contact, noting:

More student-to-student interaction was noted. In class discussions more students responded to their classmates. A few of the more reserved students began to participate in class discussion, volunteer answers and ask questions. High ability students showed independence and found other materials to complete their presentations. They also demonstrated patience with group members who were of lower ability. Students began taking more responsibility for their own learning and for their classmates’ learning.

If nothing else in the seven months, teachers involved in the project have come to a place where they see that the most problematic areas for them (i.e., the factors that mitigate against learning in the classroom such as poor attention, dependence on the teacher, pupil non-participation, and conflict among pupils, especially low attaining pupils and males) are aspects of the learning situation that are within their power to change. This quote from the teacher of a male pupil, Damian, is significant because it lays bare the very sensitive issue where teaching low achieving boys is concerned. According to this teacher:

the vocally responsive Damian is a new phenomenon.

Damian, himself, stated:

You will get more information when you are in a group instead of by yourself.

Another teacher described a change in the relationship between herself and a pupil, noting simultaneous changes in his response to school and within-class activity:

This was a pupil who was always absent from class and used the slightest excuse to get away from it and could have been very disobedient at times.... There was a change in H's attitude towards his studies and me, his teacher.... I really saw a turn around in his approach towards his studies. He improved on his regularity and punctuality for his classes. He participated a lot in group discussions and sometimes seemed frustrated when group members strayed from the task. Before this, he would hardly ever attempt assignments given and showed very little concern for the grade that he received. This changed. After each exam in the group learning lessons, he asked for the solutions in areas that he did not understand where he went wrong. He came directly to me in a very nice and humble manner for me to explain the mistakes. In comparing his December and July end-of-term exam marks, he improved his average from 43% to 64%.

More generally, teachers recorded positively perceiving females in all quartile groups as showing developmental changes. They had similar perceptions about males. They perceived improvement to be associated with less teacher-focused talk in the classroom, greater independent pupil activity, and increased independence from the teacher. Females were more frequently perceived as improved problem solvers and, overall, pupils in the low attaining quartiles as showing positive change in general knowledge, attentiveness, ability to work in groups, autonomy, and improved peer relations or decreased bossiness. Pupils showed a willingness to engage teachers in discussion about classroom work.

The relational group process clearly created an atmosphere the pupils liked, especially for the males. One pupil, commenting on her liking of social studies (after the group work intervention), stated:

Because I learn to communicate with other people, and also to develop work. I also learn to have courage and strength. I learn to work better. I also build self-esteem.

In other findings related to the micro activities within the groups, such as pupils' feelings and reactions, and their sensitivity to others, the major finding was that most positive strides with respect to pupils' feelings about group work were made by the lowest and highest attaining groups, and males more than females (what happens in your class; about your work; attitude to social studies). The responses that indicated how pupils 'got on with others' indicated that the more negative relational attitudes ('I like working with friends all the time'; 'others are always winding me up') decreased, thereby giving way to the more positive such as 'I like to make my own point of view'; and 'I have lots of ideas to share'.

In other words, the pupils felt better about themselves. The teachers saw themselves as more empowered without the need to be ‘in control’. In such an atmosphere, one should therefore not be surprised by the increased academic competence.

### **Conclusion**

The application of a relational group working approach to traditional classrooms in two Caribbean countries highlights three key issues: classroom change, learning relationships, and aspects of quality in the educational process. The first two issues focus on the classroom, while the third provides insight into the development of education systems—especially in light of the international movement towards ‘Education for All’ (UNESCO, 2000).

The first issue notes that classroom change, more particularly change in the pedagogic interactions among teachers, pupils, and peers, is vital if problems of underachievement are to be overcome. In schools dominated by traditional teaching/pedagogic approaches, underachievement is an expected outcome (as well as dropout and retention). Only by changing teachers’ and children’s expectations of involvement will participation (of all pupils, including underachievers) increase. This study has shown how a change in classroom pedagogy that includes relational group working is associated with increased attainment by pupils. The study has also shown how productive classrooms can become when teachers’ understanding of effective learning includes pupils’ ability to relate well to classroom peers and the taught curriculum.

Secondly, teachers and pupils should realize that relationships are an important component in their development of learning and classroom involvement. Developmental psychologists have stressed the role of interpersonal relationships in learning for many decades (see Hall, 1994; Piaget, 1979; Vygotsky, 1978; and others), but teachers rarely bring this knowledge into their classroom actions. This study has shown that development of relationships should be well planned, drawing upon theoretical and practical activities such as the relational group work approach used here.

Thirdly, it was stressed from the start of this study that the improvement of attainment and human capital (especially among underachieving pupils) in schools cannot be achieved by simply providing access to schools. Both teachers and pupils need to move away from traditional methods and expectations to consider how the classroom can be used as a device to promote social inclusion through processes such as relational group working.

## References

- Aronson, J. (2004). The threat of stereotype. *Educational Leadership*, 62(3), 14–19.
- Bailey, B., & Bernard, M. (2004). *Establishing a database of gender differentials in enrolment and performance at the secondary and tertiary levels of the Caribbean education systems*. Attachment VII to the Working Document for the Eleventh Meeting of the Council for Human and Social Development, Georgetown, Guyana, October 28–29, 2004. Unpublished manuscript.
- Baldwin, S. (1897). *Social and ethical interpretation in mental development: A study in social psychology*. New York: Macmillan.
- Barton, P. E. (2004). Why does the gap persist? *Educational Leadership*, 62(3), 8–13.
- Bennett, N., & Dunne, E. (1992). *Managing groups*. Hemel Hempstead: Simon & Schuster Education.
- Black, P. J., & Wiliam, D. (1998). *Inside the black box: Raising standards through classroom assessment*. London: School of Education, King's College London.
- Blatchford, P., Kutnick, P., & Baines, E. (1999). *The nature and use of within-class pupil groupings in primary schools*. Final report to the Economic and Social Research Council. Swindon, UK: ESCR.
- Blatchford, P., Kutnick, P., & Galton, M. (2004). *Findings from the SPRinG project: Improving the effectiveness of pupil group work in classrooms*. Paper presented at the ESRC/TLRP Conference, Cardiff, Wales.
- Blatchford, P., Kutnick, P., Baines, E., & Galton, M. (2003). Toward a social pedagogy of classroom group work. *International Journal of Educational Research*, 39, 153–172.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Cohen, E. G., & Intili, J. K. (1981). *Interdependence and management in bilingual classrooms: Final report (No. NIE-G-80-0217)*. Unpublished technical report, Stanford University.
- Coleman, J. S. (1975). The concept of equality of educational opportunity. In D. M. Levine & M. J. Bane (Eds.), *The inequality controversy: Schooling and distributive justice* (pp. 199–213). New York: Basic Books.
- Cowie, H., Smith, P. K., Boulton, M., & Laver, R. (1994). *Cooperation in the multi-ethnic classroom*. London: David Fulton.
- Crowe, C. (2002). Male under-performance in the Barbados Education System: An empirical note. *Economic Review*, 29(1), 19–29.
- Galton, M., & Williamson, J. (1992). *Group work in the primary school*. London: Routledge.
- Hall, E. (1994). The social relational approach. In P. Kutnick & C. Rogers (Eds.), *Groups in schools* (pp. 129-142). London: Cassell.
- Harbison, F., & Myers, C. (1964). *Education, manpower and economic growth: Strategies of human resource development*. New York: McGraw-Hill.
- Harewood, G. N. (2000). *Addressing the learning needs of males in the Eastern Caribbean: Final report*. Washington, DC: World Bank.
- Johnson, D., & Johnson, R. (1987). *Learning together and alone*. Englewood Cliffs, NJ: Prentice-Hall.

- Jules, V. (1992). Cooperative learning: Student perceptions of the changing structure of learning. *Contemporary Education*, 63(3), 191–194.
- Jules, V. (1994). *A study of the secondary school population in Trinidad and Tobago: Placement patterns and practices*. St. Augustine, Trinidad: Centre for Ethnic Studies, ISER.
- Jules, V. (1998). *Students' experiences of secondary schooling in Trinidad and Tobago: The first three years*. Unpublished doctoral dissertation, The University of the West Indies, St. Augustine, Trinidad.
- Jules, V. (1999). *Students' affective reactions to their early secondary schooling experiences in Trinidad and Tobago*. Kingston, Jamaica: UNESCO. (EFA in the Caribbean: Assessment 2000. Monograph Series No. 4)
- Jules, V., & Kutnick, P. (1997). Student perceptions of a good teacher: The gender perspective. *British Journal of Educational Psychology*, 67, 497–511.
- Jules, V., & Panneflek, A. (2000). *EFA in the Caribbean: Assessment 2000: Subregional report: Vol. 2. The state of education in the Caribbean in the 1990s*. Kingston, Jamaica: UNESCO.
- Kulik, J. A., & Kulik, C-L. C. (1992). Meta-analytic findings on grouping programs. *Gifted Child Quarterly*, 36, 73–77.
- Kutnick, P. (1992). *Preschool attendance and primary school performance in Trinidad: A focused cross-sectional study*. St Augustine, Trinidad: Faculty of Education, UWI. (Occasional Papers)
- Kutnick, P., Blatchford, P., & Baines, E. (2002). Pupil groupings in primary school classrooms: Sites for learning and social pedagogy? *British Educational Research Journal*, 28(2), 189–208.
- Kutnick, P., Blatchford, P., & Baines, E. (2005). Grouping of pupils in secondary school classrooms: Possible links between pedagogy and learning. *Social Psychology of Education*, 8(4), 349-374.
- Kutnick, P., Jules, V., & Layne, A. (1997). *Gender and school achievement in the Caribbean*. London: Department for International Development.
- Kutnick, P., & Manson, I. (1998). Social life in the primary school: Towards a relational concept of social skills for use in the classroom. In A. Campbell & S. Muncer (Eds.), *The social child* (pp. 165-188). Hove: Psychology Press.
- Landsman, J. (2004). Confronting the racism of low expectations. *Educational Leadership*, 62(3), 28—32.
- Layne, A. (2000). *Gender inequalities in educational enrolment and achievement in the borrowing member-countries of the Caribbean Development Bank*. Bridgetown, Barbados: Caribbean Development Bank and The University of the West Indies.
- Lewis, J., & Cowie, H. (1993). Cooperative group work: Promises and limitations a study of teachers' values, *Education Section Review*, 17(2), 77–84.
- Litchfield, R. (1991). Solving an educational crisis. *Canadian Business*, 64(2), 57–64.
- Lou, Y., Abrami, P. C., Spence, J. C., Poulsen, C., Chambers, B., & d'Apollonia, S. (1996). Within-class grouping: A meta-analysis. *Review of Educational Research*, 66(4), 423–458.
- McClelland, D. (1969). Does education accelerate economic growth. In M. A. Eckstein & H. J. Noah (Eds.), *Scientific investigations in comparative education* (pp. 313–340). London: Macmillan.

- Mercer, N. (2000). *Words and minds: How we use language to think together*. London: Routledge.
- Miller, E. (2000). *Education for all in the Caribbean in the 1990s: Retrospect and prospect*. Kingston, Jamaica: UNESCO. (EFA in the Caribbean: Assessment 2000. Monograph Series, No. 19)
- National Institute of Higher Education, Research, Science and Technology (NIHERST). (2002). *Profile of teachers in public secondary schools, 1999–2000*. Port of Spain: Author.
- Osborn, A. F., & Milbank, J. E. (1987). *The effects of early education*. Oxford: Clarendon Press.
- Pepitone, E. (1980). *Children in cooperation and competition*. Lexington, MA: Lexington Books.
- Piaget, J. (1928). *Language and thought of the child*. London: Routledge & Kegan Paul.
- Piaget, J. (1979). *Science of education and the psychology of the child*. London: Routledge & Kegan Paul.
- Plummer, G., & Dudley P. (1993). *Assessing children learning collaboratively*. Chelmsford: Essex Development Advisory Service.
- Rogers, C. (1982). *A social psychology of schooling*. London: Routledge and Kegan Paul.
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. New York: Holt, Rinehart & Winston.
- Scherer, M. (2004). Perspective/Not just about facts. *Educational Leadership*, 62(3), 7.
- Shunk, D. (1990). Self-concept and school achievement. In C. Rogers & P. Kutnick (Eds.), *The social psychology of the primary school* (pp. 70–91). London: Routledge.
- Slavin, R. (1987). Developmental and motivational perspectives on cooperative learning: A reconciliation. *Child Development*, 58, 1161–1167.
- Slavin, R. (1990). Cooperative learning. In C. Rogers & P. Kutnick (Eds.), *The social psychology of the primary school* (pp. 226–246). London: Routledge.
- Sylwester, R. (1994). How emotions affect learning. *Educational Leadership*, 52(2), 60–65.
- Trinidad and Tobago. Ministry of Education. (1999). *Education for all: Assessment 2000: Trinidad and Tobago*. Port of Spain, Trinidad: Ministry of Education. (EFA in the Caribbean: Assessment 2000 Country Reports)
- UNESCO. (2000). *The Dakar Framework for Action*. Paris: Author.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- World Bank. (1993). *Caribbean region: Access, quality and efficiency in education*. Washington DC: Author.
- World Bank. (1999). *Educational change in Latin America and the Caribbean*. Washington DC: Author.



## APPENDIX A

### *Educational Questionnaire*

*Please complete a questionnaire for each student in your class. Your assessment should be based on the student's general behaviour and performance within your classroom (do not comment on the behaviour or performance of the student in another teacher's classroom.) A fair and objective assessment of the behaviours referred to will be of considerable use.*

Student's Name: \_\_\_\_\_ Class: \_\_\_\_\_

Student's Sex: Male [...] Female [...] Today's Date: \_\_\_\_\_

#### **Completion of Scales:**

**For each answer there are 7 points to select between two contrasting views. Please place an 'X' on the numbered point that best represents your view of the student, etc:**

#### **EXAMPLE:**

Does the student persevere when faced with a difficult problem?

Most of the time [ 7 ] [ **X** ] [ 5 ] [ 4 ] [ 3 ] [ 2 ] [ 1 ] Not at all

This means that on the majority of occasions the student does persevere.

#### **Assessments:**

**Assess the state of the student's general knowledge in your curriculum area:**

Very well informed [ 7 ] [ 6 ] [ 5 ] [ 4 ] [ 3 ] [ 2 ] [ 1 ] Extremely limited

**When confronted with a problem in class does the student react toward others with:**

Hostility [ 1 ] [ 2 ] [ 3 ] [ 4 ] [ 5 ] [ 6 ] [ 7 ] Amicability

**When talking to you about classwork, is the student normally (compared to the rest of the class):**

Very talkative [ 1 ] [ 3 ] [ 5 ] [ 7 ] [ 5 ] [ 3 ] [ 1 ] Reluctant to talk

**To what extent does the student pay attention to what has been assigned in class?**

A great deal [ 7 ] [ 6 ] [ 5 ] [ 4 ] [ 3 ] [ 2 ] [ 1 ] Not at all

**How well does the student cope with the demands of working in a group?**

Works well with others [ 7 ] [ 6 ] [ 5 ] [ 4 ] [ 3 ] [ 2 ] [ 1 ] Unable to work with others

**To what extent does the student tend to do things on his or her own?**

A great deal [ 1 ] [ 3 ] [ 5 ] [ 7 ] [ 5 ] [ 3 ] [ 1 ] Not at all

**To what extent is the student:**

Dependent on teacher [ 1 ] [ 3 ] [ 5 ] [ 7 ] [ 5 ] [ 3 ] [ 1 ] Self reliant

Very popular with peers [ 7 ] [ 6 ] [ 5 ] [ 4 ] [ 3 ] [ 2 ] [ 1 ] Not popular with peers

Very bossy to peers [ 1 ] [ 3 ] [ 5 ] [ 7 ] [ 5 ] [ 3 ] [ 1 ] Very submissive to peers

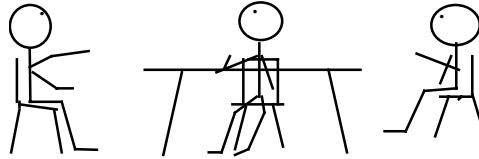
## APPENDIX B

# GAD Project <sup>i\*</sup>

## Working in Groups

Sam

and friends



### Feelings about group-work

Sam goes to school like you. Sometimes Sam gets a bit puzzled by what is going on.

To help people like Sam at school, we need to know how people like **you** feel today so we can make things better for Sam and friends tomorrow. But not everyone is the same! So your views do count.

Could you try Sam's question lists about working in groups ? These question lists have been tried out and they do work. **Your answers** will now help us to get the best kinds of group-work.

There are six question lists, but you might not be trying them all today.

Can you **answer every question** you are asked to answer, as quickly as you can, by making a tick mark in the box?

There are no right and wrong answers. Just make sure you **tick what you really feel**.

Your answers are very special. Don't show the tick marks to anyone else.

We need to ask some more questions later so we ask for your name to see if things change. Please write your name in the box below:

Name

Boy or girl

--	--

**Off you go**

.....



.....over the page.....

\* This questionnaire was adapted from the SPRinG Project, based at the Universities of Brighton, London and Cambridge.

**1. Working in groups**



*Just put a tick [ ✓ ] in the box you choose ...easy...*

Statement	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1. I like to share what I know with others in the group.					
2. Learning is more interesting in groups.					
3. We should help others in the group if there is a problem.					
4. If we don't all agree, we should look for common ground.					
5. Groups encourage you to work hard.					
6. I get no work done when in a group.					
7. We should all have a say in the decisions made.					
8. Group work is fun.					
9. To get a job done in the group you have to work together.					
10. You get to think more in groups.					

**Did you answer every one?** You did? Then, you have finished this one! Sam and all the team

wish you well. ....



**2. What happens in your class?**



*Just put a tick in the box you choose.*

Does this happen?	Always	Nearly always	Some-times	Only now and again	Never
1. We take turns when talking.					
2. There is interrupting or cutting off.					
3. We are sensitive to the needs of others.					
4. We discuss things and do not argue.					
5. We get on well together.					
6. We are well organised.					

**Did you answer every one?** You did? Then, you have finished this one! Sam and all the team

wish you well. ....



**3. Getting on with others .....**



*Just put a tick in the box you choose.*

Statement	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1. If I don't like someone, I won't work with them.					
2. I like working with friends all the time.					
3. I like to make my point of view.					
4. I have lots of ideas to share with others.					
5. It's 'cool' not to be too smart.					
6. Others are always winding me up.					
7. I keep quiet about my own ideas.					
8. I have some really close friends.					
9. I usually follow the others and do what they do.					
10. I would say I am a popular person.					

**Did you answer every one?** You did? Then, you have finished this one! Sam and all the team

wish you well. ....




**4. About your work ....**




*..... Just put a tick in the box you choose.*

Statement	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1. I am doing well in most subjects.					
2. I work hard to please my parents.					
3. I am pretty confident about doing the tasks I am set.					
4. I do my best to get the highest mark in my examinations.					
5. I try to learn as much as I can.					
6. I can write really well in English.					
7. I need to work hard to get to university.					
8. I like to start new, more difficult work.					
9. I would say that I am a really hard worker.					
10. I feel proud when I get good marks.					

**Did you answer every one?** You did? Then, you have finished this one! Sam and all the team


wish you well. .... 

**5. Liking social studies**

....  ..... *Just put a tick in the box you choose to show how you feel.*

Statement	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1. I like social studies more than any other school subject.					
2. I like doing social studies projects.					
3. We should have fewer social studies lessons.					
4. I should like to get a job where I can use all I know about social studies.					
5. Learning social studies makes me think better.					
6. I should like to be a social scientist.					

**Did you answer every one?** You did? Then, you have finished this one! Sam and all the team

wish you well. .... 



**6. How you react to situations**  
**NO...**

*Just mark your answer by ticking [✓] YES... or*

1. Do you like team games? .....	YES....	NO....
2. Do you always feel pressured? .....	YES....	NO....
3. Do you like going to parties? .....	YES....	NO....
4. Do lots of things annoy you? .....	YES....	NO....
5. Would you like parachute jumping? .....	YES....	NO....
6. Do you find it hard to get to sleep at night because you are worrying about things ? .....	YES....	NO....
7. Do you often feel life is very dull? .....	YES....	NO....
8. Can you let yourself go and enjoy yourself a lot at a lively party?	YES....	NO....
9. Do you ever feel 'just miserable' for no good reason? .....	YES....	NO....
10. Do you think others often say nasty things about you? ....	YES....	NO....
11. Do you have lots of friends to go with at school? .....	YES....	NO....
12. Are your feelings rather easily hurt? .....	YES....	NO....
13. Do you often feel 'fed-up'? .....	YES....	NO....
14. Would you call yourself 'happy-go-lucky'? .....	YES....	NO....

**Did you answer every one?** You did? Then, you have finished all the testing



this time! Sam and all the team wish you well. ....

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