ED 364 640   UD 029 622

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TITLE   Accelerating the Learning of At-Risk Students: An
                Evaluation of Project ACCEL.
INSTITUTION   Newark Board of Education, NJ. Office of Planning,
                Evaluation and Testing.
PUB DATE   May 93
NOTE   132p.
PUB TYPE   Reports - Evaluative/Feasibility (142) --
                Tests/Evaluation Instruments (160)

EDRS PRICE   MF01/PC06 Plus Postage.
DESCRIPTORS   *Academic Achievement; *Acceleration (Education);
                *Attitude Change; *Elementary School Students; Grade
                6; Grade 7; Grade Repetition; *High Risk Students;
                Intermediate Grades; Junior High Schools; Junior High
                School Students; *Low Achievement; Parent Attitudes;
                Program Effectiveness; Program Evaluation; School
                Districts; Self Esteem; Student Attitudes; Teacher
   Attitudes; Urban Schools
IDENTIFIERS   Newark School System NJ; *Project ACCEL NJ

ABSTRACT
                Project Accelerated Curriculum Classes Emphasizing
Learning (ACCEL) was implemented by the Newark School District (New
Jersey) in the 1989-90 school year in response to the ineffective
practice of retaining underachieving students. The innovative
approach of accelerated learning was made available to retained sixth
and seventh grade students. These students were allowed to skip a
grade if they met the academic requirements stipulated by the
district for promotion. This report is organized into five sections:
(1) principles of Accelerated Learning and an overview of Project
ACCEL; (2) results from teacher survey; (3) results from student and
parent surveys; (4) results of the Achievement Test; and (5)
conclusions and recommendations. Responses of the 11 teachers who
replied clearly point to beneficial effects of the program on student
self-esteem, in spite of some program implementation problems.
Responses of 185 ACCEL students and 154 non-ACCEL students support
positive effects of the program on student attitudes and educational
goals. Survey replies of 131 parents also indicate constructive
changes in student attitudes. Achievement test score improvements for
reading and language and a non-significant improvement in mathematics
indicate that the program is effective in improving academic
achievement. Recommendations are made for program improvement. Three
figures, 1 chart, and 22 tables present study data. An appendix
contains the surveys. (Contains 7 references.) (SLD)

Accelerating the Learning of
At-Risk Students:
An Evaluation of Project ACCEL

Soundaram Ramaswami, Ph.D

3

ACKNOWLEDGEMENTS

i

4

TABLES OF CONTENTS

LIST OF FIGURES & CHART

LIST OF TABLES

(CONTINUED: LIST OF TABLES)

CHAPTER 1

Introduction

Project ACCEL (Accelerated Curriculum Classes Emphasizing Learning) was conceived and implemented by the Newark School District in the 1989-1990 school year, in response to the ineffective instructional practice of retaining underachieving students. Researchers in the field (Walker & Madhere, 1987) have shown that retention is more harmful than beneficial to students. Students who experience retention tend to develop low self esteem and possess greater potential to become dropouts. This negative impact seems to be even more pronounced in upper elementary and high school students.

The innovative approach of accelerated learning was made available to retained sixth and seventh grade students. These students were allowed to skip a grade, if they met the academic requirements stipulated by the district for promotion. For instance, a sixth grade student was allowed to be promoted to the eighth grade, if he/she successfully met the requirements for promotion to both seventh and eighth grades.

The primary objective of this report is to address the issues related to the effectiveness of Project Accel. The report is organized into four sections: (i) principles of Accelerated Learning and an overview of Project Accel, (ii) results from teacher survey, (iii) results from student and parent surveys, (iv) results of the Achievement Test Scores, and (v) conclusions and recommendations.

Principles of Accelerated Learning

Project Accel has been modeled on the principles of accelerated learning for at-risk students proposed by Hopfenberg, Levin et.al., (1990). These researchers have

1

argued that the assumptions and pedagogy which are embedded in many curriculum and instructional practices tend to negate students' feelings toward schools. In particular, low expectations, non-challenging learning experiences and a body of learning that does not consider higher order cognitive skills induce failure and negative feelings about schools.

Accelerated learning attempts to eliminate some of these practices and replace them with congenial conditions that will allow learning to take place at an accelerated pace. Accelerated learning refers to boosting the amount of learning which takes place within a given time; Levin, 1988:5. The four major components of accelerated learning are: (i) capacity, (ii) effort, (iii) time and (iv) quality of learning resources. While capacity refers to the various attributes a learner brings to the task, effort points to the intensity with which a learner uses his/her capacity to complete the task. Time refers to a given learning activity, and quality of learning indicates factors which are directly related to curriculum, instruction and organization.

Executing these principles involve major revisions of curriculum, instructional strategies and organization. Curricula changes include stressing language across subject matter, experiential learning, higher order cognitive skills and common curricular objectives. Instructional strategies focus on cooperative learning, peer tutoring, and educational technology. Organization in schools involves shared decision-making, flexible scheduling and parent participation. All these changes are guided by the principles of unity of purpose, empowerment and building on strengths (Hopfenberg, Levin et.al., 1990:14-17).

In a nutshell, the essence of this educational strategy is to facilitate the rate of learning of at-risk students beyond what is considered normal, so that these students can catch up with their more advantaged peers.

2

An overview of Project Accel

Project Accel refers to the accelerated learning program designed for sixth and seventh grade students in the Newark School District, who have experienced retention at least once. The goal of this program is to enable the retained students to rejoin their peers at the appropriate grade level. In order to accomplish this goal, the process of schooling and the principles of educational strategies had to be redefined. The following attributes were incorporated by Project Accel in the redefinition of schooling for the retained students:

1) Empowerment of Teachers - Teachers were given control over all major decisions affecting the program. They developed the curriculum in consultation with the District, selected students for participation, made decisions regarding instruction and other pedagogical issues.

2) Departmentalization of Academics - Teachers taught a single content area. This allowed teachers to concentrate their skills on an academic area in which they felt most competent. Subject matter teaching minimized the stress associated with increased instructional pace.

3) Small Class Sizes - The student teacher ratio was kept at a rate close to 12:1. This enhanced the opportunity for greater pupil-teacher personal contact and individualized instruction.

4) Student Monitoring and Feedback - Students were evaluated on a weekly basis for attendance, homework completion, behavior, and ability to cope with the pacing. Students were provided with feedback at least twice a month through an informal conference. This feedback allowed students to be aware of how well they were doing relative to the goals of the program, and allowed them to employ corrective measures before failure occurred.

5) Student Performance Contract - Students and their parents signed a contract before acceptance into the program. That contract specified the expectations for academic and behavioral performance. It also stated the basis on which students would be accelerated, continue to be enrolled, or become prematurely expelled from the program.

6) Experiential Approach to Instruction - Experiential learning was emphasized throughout the curriculum.

3

11

7) Self-Esteem Building - A guidance counselor conducted a group counseling session for a 40 minute period each day. The focus of these sessions was to improve students' conceptions of their self worth.

8) Extended School-Day - Students were encouraged to participate in an After School Tutorial Program.

9) Cooperative and Peer Tutoring - Students were engaged in shared learning experiences and activities in all subject matters.

10) Reinforcement - Students received positive reinforcement in the form of donated books and Savings Bonds for academic progress, as well as verbal cues.

11) Parental Participation - Parents signed all homework, attended an orientation meeting, and were sent weekly progress reports.

The features of Project Accel show a strong parallel between its organizational and pedagogical orientations and the model of accelerated learning proposed by Levin (1988) and others.

CHAPTER 2

Results of Teacher Assessment of Project Accel

The success of any new program is contingent upon its effective implementation. Therefore, the perceptions and attitudes of the staff that was involved in the process of implementation is crucial to understand the strengths and deficiencies of the program. As part of the evaluation, the teachers in the program were interviewed with the help of an open ended questionnaire. The information obtained has been organized under different categories and presented both in the form of charts and discussions.

Project Accel was set up in four schools in the district. Although, there were a total of 16 teachers from the four schools (each school had four teachers assigned to Accel), we received only 11 teacher responses. While all the four teachers from Bergen and Maple responded to our survey, only 2 from McKinley and 1 from Thirteenth Avenue sent back their responses. In each school, one teacher was assigned to a single subject area, namely, reading, mathematics, science/social studies, and basic skills. However, in Thirteenth Avenue due to internal problems, one of the Accel teachers had to leave the program to be the acting Vice Principal. This position was later filled by a math substitute teacher.

Before we analyze the responses, we have to bear in mind that the teachers, in spite of their autonomy, were restrained by the rules and regulations of the host schools and were still governed by the authority of the principals and vice principals. Also, it is essential to bear in mind that due to the very nature of the Accel program and the discretionary power given to the teachers, conflicts can erupt between staff and school personnel. From the responses of the teachers from last year it was evident that there

were some problems in communication and organization. However, in spite of organizational problems, last year's program seems to have had an overall positive review from the Accel teachers.

Teachers' Assessment of Level of Support Received From Host School

This section will evaluate the perceptions of teachers about the level of support received from key individuals such as the principal, vice principal, guidance counsellor, and other teachers. Chart 1 presents the teachers' remarks by school, with the key words used by the teachers in describing their relationship with the staff.

A general theme that emerged from a preliminary examination of the data was that teachers had a very positive and supportive relationship with school personnel. Adjectives used to describe these relationships were "helpful", "supportive", "good", and "cooperative". However, it did not preclude administrative problems. As pointed out by teachers from two schools, in spite of their cooperative nature, the principal and/or the vice principal of these schools lacked in communication skills and did not understand the policies, procedures or the goals of Project Accel. In one teachers' words, "this, at times, created confusion". This clearly underscores that the effective implementation of the program is contingent upon the involvement of key individuals, for example, the principal. Elsewhere in the questionnaire, comments on implementation problems pointed to other issues such as a shortage of materials, supplies and books.

The guidance counsellors have also played a very effective and important role in the program. They have been rated very highly and were perceived to be "helpful", "cooperative", and "extremely supportive". As pointed out by a teacher, '...she functioned as an intricate part of the team..... she gave her best to the project all the

6

14

CHART 1

Accel Teachers Assessment of Relationship Between Them and Other School Personnel

Schools	Principal	Vice Principal	Other Teachers	Guidance Counselior
BERGEN	Great Cooperative Supportive	Helpful Cooperative Supportive	Some pleased Some resentful of class size Did not possess knowledge of program Most want to participate	Gave her best Helpful Cooperative
MAPLE	Good Excellent Sometimes-Lacked communication & understanding	Good Excellent	Good Cooperative Envious Some resentment	Good Need more
MCKINLEY	Not well informed about policies & procedures Created confusion	Not well informed but cooperative	No understanding of program Sees program teachers as elite group	Very helpful
THIRTEENTH AVE.	Supportive	Supportive	Project Accel was a dumping ground for slow learner Envious	Supportive Intricate part of the team

7

16

time'. However, when it came to the discussion of their relationship with other faculty members, there was a great deal of ambivalence. While some teachers were helpful and pleased with their Accel counterparts, others were resentful for various reasons such as, low student/teacher ratio in the Accel program. Accel teachers also noted that some of these teachers who felt envious and resentful, neither possessed adequate knowledge of the program nor understood the program goals. In general, it appeared that there were two groups of teachers, one pleased with and willing to help Project Accel, and the other, envious and resentful of Project Accel. Since this perception was prevalent across the four schools involved, it may need to be addressed in the staff meetings of these schools to alleviate any misguided feelings among teachers.

In summary, although the relationship between Accel teachers and the rest of the school staff appeared to be congenial, the discretionary power possessed by the Accel teachers created feelings of enmity and hostility among other teachers. Such a climate can undermine the effectiveness of Project Accel and can be detrimental to its further development. A sincere attempt will have to be made by the organizers to nip this at its inception by providing ample information about the program and its benefits.

Teacher Assessment of Organizational Aspects of Project Accel

Teachers' perception of various features of the programs are dealt with in this section. Concepts such as team teaching, student/teacher ratio, flexibility, screening process and staffing were unique to this program. Teachers involved in Accel were given a free hand in making decisions and in operationalizing these concepts.

Team teaching was viewed positively by all the teachers from the different schools, with the exception of one teacher who attributed the failure to

8 17

'.....external/unforeseen and some internal disruptions during the school year'. This teacher also complained about poor working relationship involving substitutes and frequent changes to the schedule. In all, we may say that these problems are reflective to some extent of the administrative difficulties in the host school. On the other hand an alternate perspective was provided by another member of this school's team who viewed team teaching to be effective and useful. The same sentiment was shared by most of the other teachers who claimed the concept to be "effective", "very good", and "interaction among teachers helpful".

A low student/teacher ratio was unequivocally proclaimed to be another major advantage for these teachers, since it enabled them to individualize their attention to the students. They further argued that the reduced class size allowed the students' "social and emotional development", as well as "social progress". Similarly, flexibility in schedule was viewed to be beneficial as it facilitated a better instructional environment. As explained by teachers from one of the schools, it not only helped teachers to meet the needs of the students by extending periods whenever necessary, but also provided the students with more time to complete their assignments.

However, the needs and perceptions of teachers regarding staffing, and screening and exiting of students differed significantly. As it relates to staffing, there was a diversity of view points. In one school, teachers complained about the team being dysfunctional because of feelings of despair, and fewer teachers on the team. In another school, one teacher suggested that periodical reviews of teacher satisfaction with the program should be conducted. These comments would seem to imply problems with the functioning of the teams in the schools. On the other hand, most of the other teachers rated the staff to have good team spirit. They noted that the team spirit enhanced their

9

ability to effectively meet the needs of the students. They also felt that the different abilities and talents, which they individually possessed, helped them to complement each other.

With respect to screening, only one school appeared to be somewhat satisfied with the process of screening students, although they complained that '.....the group from which we selected was limited.... and ......the process needs more input'. Other schools cited lack of time as a major factor in the selection of process. Further, the process was viewed as being hindered by the 'pressure to fill up as close to 50'. Another area that was considered to be problematic was expelling students. Both the teachers from one school reported that they were unable to exit students that actually met the criteria for expulsion. These comments point to constraints faced by teachers in carrying out these functions and suggest that guidelines regarding these issues be carefully examined.

The problems encountered in screening and expelling were further evidenced through teacher comments about 'implementation problems'. The comments suggest that the time allotted for the selection process was inadequate and that the test scores provided were not accurate measures of students' ability. Consequently, this may have resulted in the placement of non-eligible students into the program.

Teachers Assessment of Instructional Strategies And Their Effectiveness

Table 1 presents an overview of the different instructional techniques used by the teachers and their evaluation of the effectiveness of these techniques. On the whole, the responses were overwhelmingly favorable. After-school instruction and motivational techniques were rated highly by all teachers. One of the teachers rated the use of hands on materials as not being very effective (effectiveness = 2). With the exception of this,

TABLE 1

Use of Instructional Strategies and their Effectiveness by School

Instructional Technique	Bergen	Maple	McKinley	Thirteenth Ave
PEER TUTORING				
Number of Teachers	4	4	1	2
Range of Effectiveness	3-5	4-5	5	4-5
COOPERATIVE LEARNING				
Number of Teachers	4	4	1	1
Range of Effectiveness	3-5	4-5	5	5
HANDS ON MATERIALS				
Number of Teachers	4	4	1	2
Range of Effectiveness	2-5	5	5	5
MOTIVATIONAL TECHNIQUES				
Number of Teachers	4	4	1	2
Range of Effectiveness	4	4-5	5	5
AFTER SCHOOL INSTRUCTION				
Number of Teachers	4	3	1	2
Range of Effectiveness	4-5	4-5	5	4
HOMEWORK				
Number of Teachers	4	4	1	2
Range of Effectiveness	3-5	3-5	5	3-4

Number of Teachers - refers to the number of teachers who used the strategy.
Range of Effectiveness - 1-5: "1" being not effective, and "5" being "very effective".

21

20

11

all other techniques appeared to have worked very well in the judgment of the Accel staff. The same sentiment was echoed by the teachers in discussing their experience as Accel teachers. Several of the staff credited effectiveness of such techniques as peer tutoring and cooperative learning to the small class sizes.

Teachers' perceptions of the effectiveness of these techniques are crucial as they enable the teachers to deal with the increased pacing of instruction which the program calls for. While two teachers have credited techniques like strict homework policy and after school tutorial programs to have aided in coping with pacing, others reported encountering problems in the area of pacing. Specifically, a common difficulty stated by all members was the inadequate time for instruction. Other factors such as the learning ability of students and schedule changes seemed to have adversely affected the teacher's ability to effectively pace instruction.

Teachers' Perceptions And Assessment of Students

Overall, students from these schools "respected the program" and "worked very hard to succeed". Teachers have described the students to have been excited about the program to the extent that, some of them did not want to graduate from Accel. Nevertheless, teachers from two schools mentioned conflicts between Accel and non-Accel students due to the fact that some of the Accel students were from the feeder schools. More serious discipline problems were encountered in one of the schools due to "an overall school atmosphere".

With the exception of one school, teachers appreciated the requirement of a contract signed by students and parents, in order to be enrolled in Project Accel. They viewed it as a valuable factor in influencing the success of the program. Feedback

techniques such as weekly/bi-weekly report cards, individual conferences with parents and students, group conferences, notes, and phone calls were used extensively by the teachers.

According to teachers, the program was instrumental in increasing the students' self esteem. Students learned about their capabilities and felt proud to have been selected into the program. In spite of the drawbacks mentioned earlier in the implementation of the program, teachers' comments clearly point to the benefits of the program in elevating and restoring the self worth of these students and thereby stimulating them to work harder and reach their goals. It is also clear from the above discussion that the success of the program depended to a large extent on the cohesiveness and support of the host school involved.

CHAPTER 3

Students' Attitudes Towards School

Accel and Non-Accel Students

Previous sections of this report undoubtedly indicated the impact of the program on students' self worth. The fundamental goal of Project Accel is to facilitate and foster academic growth through a new learning experience. For such a goal to be realized, it is critical that the individuals involved in the program view it as being useful and helpful. Hence, a set of surveys was administered to the Accel students in the beginning and towards the end of the program. Information thus received would allow us to understand their feelings and perceptions about the traditional school setting and the Accel program. Results of the previous study on the attitudes of these students revealed that the program influenced these students in a positive way, by improving their self image and motivation towards learning.

However, unlike the previous study which dealt only with the attitudes and perceptions of Accel students, this study has expanded to accommodate the feelings and attitudes of their non-Accel counterparts. This has been made possible due to the availability of data collected on a set of students who were eligible to be in the program but were not selected. This non-Accel group consisted of students from the same four schools and a few from Chancellor Avenue. Consequently, this will throw light not only on the shifts in the attitudes of Accel students due to the impact of the project, but also would allow us to compare the Accel students' experiences to those of their counterparts. Further, a comparison of this nature may enable us to understand the differences between

traditional and non-traditional school settings, and perhaps, their implications for the educational system.

Sample:

Two hundred and seventy students applied to the Accel Program from four schools, namely , Bergen (60), McKinley (67), Maple (77), and Thirteenth Avenue (66). However, only 50 students from each school were eligible to be selected to the program. Thus data were obtained for 185 Accel students. Similarly , data were also collected on 154 non-Accel students from the same four schools. The questionnaire was self administered by the students, and information on students' experiences in the school/program was gathered. The questionnaires were administered once in the beginning of the year and once towards the end of the year.

Table 2 presents some of the salient features of the data set. It is evident that we have an almost even number of students distributed in the four different schools. For example, the gender breakdown indicates that there were 96 and 93 male students and 89 and 61 females in the Accel and non-Accel groups respectively. There was also a larger representation of black students in both groups (149 Accel, and 126 non-Accel). Conversely, only 10 to 15% of Hispanics were present in the two groups. There were more seventh grade students (103) in the Accel group as opposed to sixth graders (82). However, the non-Accel data set had a more homogeneous distribution of 6th (82) and 7th (70) grade students.

Methodology:

Several statistical techniques were utilized to analyze the data. The two major

TABLE 2

Salient Features of Accel and Non-Accel Students

Groups	Number of Accel Students	Number of Non Accel Students
SCHOOL		
Bergen	48	45
Maple	50	46
McKinley	45	20
Thirteenth Ave	42	43
GENDER		
Male	96	93
Female	89	61
ETHNICITY		
Black	149	126
Hispanic	34	22
GRADE LEVEL		
Grade 6	82	82
Grade 7	103	70

16

techniques that need mentioning are Factor Analysis and t-test. While factor analysis was used to understand the dimensions of attitudes of all these students, t-tests were employed to ascertain the differences in attitudes. The following discussion briefly addresses these techniques.

Factor Analysis:

The primary purpose of this technique is to reduce the data in a meaningful way to a smaller set of "factors" or "components" which represent the underlying dimensions or patterns of relationships. Hence, a factor is a hypothetical construct based on a set of observed variables. A factor analysis can be carried out based on a theoretical framework to confirm the existence of factors and relationship among variables, or can be used as an exploratory tool to determine the existence of dimensions and patterns among variables.

The present study utilized this technique to determine the various dimensions of the Accel and non-Accel student attitudes. Initially, a principal component analysis was carried out to determine the number of factors present. Following that, varimax and oblique rotations were performed to identify the contents of these factors. While varimax rotation assumes the factors to be orthogonal to each other (not correlated), oblique rotation assumes that the factors are related. The decision to use the results of either method depends on the strength of the correlations between the factors. For our purpose, it was decided that the results of oblique rotations will be more appropriate to report. The factor loadings presented in the Tables 3 & 8 represent correlations between that particular variable and its factor. In order to ascertain the "goodness" of the newly constructed factor, a test of reliability was carried out using Cronbach's alpha.

T-Test:

T-tests are usually used to determine differences between groups. In this study, they were used to compare means of certain key variables. Two sets of such comparisons are reported: (a) differences in the attitudes of Accel and non-Accel students, (b) differences in the attitudes of these students before and after entering their respective programs.

The first part of the analyses to follow considers Accel students' attitudes. The second part will deal with the attitudes of the non-Accel students, and the final part will report on the differences in the attitudes of Accel and non-Accel students.

Accel Students:

Results of Factor Analysis of the Attitudes of Accel Students:

Since the self administered questionnaire concentrated on the experiences of students in such areas as feelings towards school, teachers, learning, and themselves, the data were submitted to a factor analysis to identify different dimensions. Table 3 presents the results of the factor analysis. Before we embark on the discussion of these results, it has to be noted that factor analysis technique was used as an exploratory tool in this study to aid in the identification of underlying dimensions.

Factor analysis of the Accel data set resulted in the identification of 3 dimensions of student attitudes, namely, their self efficacy as learners, school interest, and encouragement received. (The names of the factors have been assigned on the basis of their content.) Recall that the questionnaires were administered at the beginning and towards the end of the program. Table 3 reveals that the composition of variables in each of the factors differed from 'beginning ' to 'end' of the program. The Table also

18

29

TABLE 3

Factor Analysis of Attitudes of Accel Students
(In the Beginning and at the End of the Program)

Item	Self Efficacy		School Interest		Support Mechanism	
	Beginning	End	Beginning	End	Beginning	End
Concerned About Grades	.39					
Perception of Self as a Learner		.70				
Comparison with peers	.55	.52				
Study Skills	.72	.38				
RELIABILITY	.60	.53				
Study Harder Than Peers						
Enjoy School			.44	.30		
Like School			.65	.82		
RELIABILITY			.46	.32		
Understanding Teachers Well						
Teacher Encouragement					.52	.23
Family Encouragement					.38	
Study Harder Than Peers					.54	.53
RELIABILITY					.49	.28

31

30

presents factor loadings which are correlations of that particular variable to the factor. These loadings range between .23 and .82, with .23 representing a low correlation, and .82 indicating the relationship to be strong.

Three items loaded on the 'Self efficacy as learners' factor at both times, although the combination of the items differed for the two periods. At the beginning of the program, students' perception of themselves as learners was defined in terms of their concerns about grades, comparison of school work, and study skills. At the end, their self concept was defined in terms of their school work, study skills, and feelings as great student. While, at the beginning of the program these variables appear to indicate students' concerns and perceptions about learning and study habits, by the end of the year, students' perceptions appear to have crystallized further to include feelings about how good a student they were. One may argue that this shift in attitude towards self evaluation and self worth may be the result of the Accel program. The loadings on this factor ranged between .38 and .72 indicating the presence of moderate to good correlations between the variables and the factor. Of all the three factors, this seems to be the most stable, with at least three variables at both times of the administration. In addition, the reliability coefficients (beginning - .60 and end - .53) that determines the accuracy or the stability of this factor appears to be the highest of all the three factors.

The 'school interest' factor was made up of only two variables. Once again the composition of the variables involved differed. While enjoying school and liking school were the ones to make the factor in the beginning of the school year, enjoying school and studying harder seem to be the most important indices of interest in school at the end of the school year. The make up of these factors indicates that in the beginning of the year, students had a general notion towards school. But, by the end of the year, the same

students were able to convey a more complex picture of enjoying school with their motivation and the need to study harder. Although, the loadings of this factor ranged between .30 and .82, the reliability coefficients were low (.46 and .32). The low reliability coefficients were probably due to the fact that only two items made up this factor. It is well known that the reliability of a factor tends to increase as the number of items increases.

The third factor, 'support mechanisms', consisted of items such as encouragement from teachers, encouragement from family, studying harder than peers, and understanding teachers well. However, similar to the previous observations, the items loaded differently at the beginning and at the end of the school year. At the beginning of the year, teacher encouragement, family encouragement, and studying harder were the significant items that loaded on this factor. At the end of the school year, students' perception of encouragement was more focussed on the school environment, and in particular on teacher encouragement and the understanding of their teachers within the classroom. Once again, it is possible to attribute these students' feelings to their involvement in the program. The factor loadings (low to moderate) and the alpha (low) for this variable behaved in a similar manner to that of the second factor.

Usually, an alpha (reliability coefficient) of .70 to .90 is considered indicative of the stability of the factor. With the present data set, the highest alpha obtained was .60. If we are to follow rigorous statistical procedures, the factors obtained may not be qualified as stable factors. Therefore, the results obtained here should be interpreted with caution. Consequently, the results may also have limited generalizability. However, it has to be borne in mind that attitudes are very complex and what we see here is a classic example of the complexity of the human mind. Nevertheless, this

TABLE 4

Correlations of Attitudinal Items in the Beginning and at the End of the Accel Program

Items at the Beginning	Items at the End																
	1	2	3	4	5	6	10	11	12	13	14	15	16	17	18	19	20
1	.17*																
2		.21															
3			.33														
4				.42													
5					.38												
6						.49											
10							.54										
11								.33									
12									.41								
13										.18*							
14											.28						
15												.32					
16													-.35				
17														.29			
18															.39		
19																.28	
20																	.26

* For the explanation of the variable refer to the appendix. #s corresponds to the question # s on the instrument.

* Not significant at .01 level.

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34

35

22

exercise in trying to identify underlying dimensions of the attitudes of students is not futile, for information obtained here can form the basis for future analyses. Further, this can be construed as an indication of the need for further refinement of the questionnaire.

This brings us to the question of the reliability of the instruments administered at the beginning and at the end of the program. One way to test this reliability is to look at the correlations of the same variables from the two time periods. Table 4 presents the correlation of the attitudinal variables. As is evident from the Table, out of the 17 items presented, there were only two non significant correlations and the rest ranged between .21 and .54 attesting to the existence of low to moderate relationship among the same set of variables from the two time periods. This result may be construed as affirmation to the reliability of the instruments used.

Since the 'self efficacy factor' appeared to be the most stable, it was of interest to assess if there were gender, grade, or ethnic differences related to this factor. In order to delineate the differences, means of these variables were considered. Table 5 displays the means for the factors in the beginning and at the end of the program. In the beginning of the program, none of the three groups showed any significant differences in their self perception as learners. By the end of the program, however, seventh graders appeared to have developed a more positive evaluation of themselves as learners in contrast to the sixth graders. Other groups did not show any significant differences.

Changes in Student Attitudes as a Result of Project Accel:

The results from last year's study suggested that students' attitudes towards traditional schooling, were marked by feelings of disconnection and estrangement from school and teachers. They also showed that other school related attitudes such as motivation and goal setting were influenced negatively by feelings of non commitment

23

TABLE 5

Self Efficacy As Learners by Gender, Ethnicity and
Grade - in the Beginning and at the End of the Accel Program

Groups	Beginning of the Program			End of the Program		
	Mean	F-Statistic	Significance	Mean	F-Statistic	Significance
Males Females	10.38 10.58	.99	.32	9.13 9.54	.27	.10
Blacks Hispanics	10.45 10.62	.40	.53	9.40 9.16	.63	.43
Grade 6 Grade 7	10.35 10.57	1.08	.30	8.98 9.55	5.22	.02*

* Denotes Significant Differences at .05 Level.

37

38

24

TABLE 6

Differences in the Attitudes of Accel Students in the Beginning and at the End of the Program on Some Key Issues

Item	Beginning-Mean	End-Mean	Difference (Mean)	T-Value	Significance
Like School	3.9	4.1	.22	2.71	.01 *
Like Teacher	4.2	4.2	.00	.64	.52
Interest in School Work	4.04	4.16	.12	1.82	.07
Concern about Grades	4.7	4.7	.00	1.00	.32
Perception of Self as a Learner	3.7	3.6	-.01	.21	.83
Motivation	3.1	3.1	.00	.52	.60

* Denotes Significant Differences at .05 Level.

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and alienation. Therefore, it was of interest to see if positive changes in the attitudes of Accel students regarding certain key issues such as interest in school work, concern about grades, and level of motivation, had occurred as a result of their exposure to project Accel.

Table 6 provides the results of t-tests. Accel students' liking for school appeared to have increased significantly since the beginning of the school year. However, students' liking for teachers appears to be the same at both times. Although there was a slight increase in their interest in school work, this increase was not statistically significant. Similarly, their concern about achievement, their self evaluation about their learning abilities and their motivation about school and learning did not change as a result of their learning experiences in a non-traditional environment. These results must be interpreted with caution since it is hard to assert that the changes seen are truly due to the program effect. The program effect here is confounded by other factors such as the cognitive growth of the students involved. Therefore, a better way to differentiate these effects would be to compare the attitudes of Accel students with that of the attitudes of non-Accel students at the end of the school year.

Association Between Liking School and Teachers and the Obtained Factor:

Students' perception of teachers and school is likely to have an impact on their behaviors such as participation in the classroom, their interest in school work, and their concern about achievement. In order to explore and understand these relationships, correlation studies were carried out. Table 7 illustrates the association between liking school and teachers and their concerns and interests in school work. It is evident from the Table that the associations between interest in school work and liking school or teacher were significant and remained the same at both times of administration. However,

TABLE 7

Association Between Accel Students' Feelings about Teachers, and School and Concerns on Certain Key Issues (In the Beginning & at the End of the Program)

Items	In the Beginning		At the End	
	Like School	Like Teachers	Like School	Like Teachers
Interest In School Work	.34*	.33*	.48*	.30*
Concern about Grades	.19	.09	.29*	.21*
Perception of Self as a Learner	.20*	.19	.34*	.13
Participating in Class	.03	.22*	.19	-.02
Motivation	.26*	.32*	.47*	.11
Goal Setting	—	—	.24*	.20*

* Denotes Significant Relationship

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for other key issues, the pattern differed significantly. There appears to be a positive and significant increase in the association (after involvement in Accel) between students' concern about getting good grades and liking school (.29) or teachers (.21). Notice that in the beginning of the year, students concern with grades had no striking relationship with liking school (.19) or teacher (.09). We may extrapolate that learning in a non-traditional environment improved students' relationship with teachers and school, which in turn might have influenced their concern about grades.

One may also conjecture that a similar trend might be noticed with regard to student participation in classroom. Yet, that was not the case. In the beginning of the year, participation in the classroom activities did not have any bearing on liking school (.03). But there was a significant positive relationship between liking teachers and participation in the classroom (.22). This may well be true due to the interaction effects of students and teachers. Surprisingly, the same trend was not found after their involvement in Accel. On the contrary, liking teachers appears to have a very weak relationship with that of participation (-.02). However, the association between liking school and participation (.19) seems to have moved in the positive direction after involvement in Accel. Although this association was not strong, the positive change in the attitude towards school may denote decrease in the estrangement from school.

Such attitudes towards participation is bound to have repercussions on students' self evaluation as learners. It appears that students' relationship with school rather than teachers influences their view as learners. The positive increase in this relationship from the beginning of the school year (.20) to the end (.34) attests to this fact. Teachers did not appear to have influenced students rating of themselves as good students. One may

28
44

argue that what we see here may be due to their prior experiences with teachers and failure.

Whether students viewed school positively or negatively was significantly associated with their motivation levels. Table 7 shows that both in the beginning (.26) and towards the end (.47) of the program, students who reported being motivated, were more inclined to like school. However, when we look at the impact of teachers on motivation of students, there was a conspicuous deterioration in this relationship (.32 to .11). Although we cannot explain the occurrence, one may conclude that liking the school environment appears to be a more effective factor than liking the teacher in the determination of students' motivation. It was also found that motivation exhibits a positive association with interest in school work, concern about achievement, and evaluation as learners (not shown in the table). Along the same lines, after exposure to Accel, students' ability to set educational goals appears to be related to liking school and teachers. One may infer that liking teachers and school might have inspired students to crystalize their ideas and future goals.

Non-Accel Students:

Results of Factor Analysis of the Attitudes of Non-Accel Students:

As in the case of Accel students, the data set of non-Accel students was also submitted to a factor analysis to assess the different dimensions of the attitudes of these students. Results of such an analysis would show if perceptions of these students are very different from that of Accel students. The self administered questionnaire was given once at the beginning and once at the end of the year.

The first administration in the beginning of the year yielded two factors. The first

factor can be named 'School Factor' which consisted of 8 items representing different perceptions and attitudes towards school, and school work (see Table 8). Liking school, participating in classroom activities, interest in school work, concern about achieving good grades, motivation, self evaluation as learners, and study skills were the variables that were combined together to make up this factor. These results were dissimilar to the results obtained for the Accel students, in so far as, this factor encompassed several aspects of school activities. However, by the end of the year, the school-related factor seemed to have become more parsimonious and focussed. These variables definitely suggest a more concrete thinking which may be attributed to the cognitive growth of students. Recall that these students were also eligible for the Accel program, but for various reasons were not selected to the program. Dissatisfaction and despondency might have influenced their thinking and responses in the beginning of the year. However, by the end of the year the same students were able to focus on a few key issues such as motivation, participation, interest, and studying harder that are related conceptually with liking and enjoying school.

The reliability for this factor at both administration appears to be pretty good. The school factor in the beginning of the year yielded a reliability of .72, and at the end of the year the reliability was .71. Therefore, to some extent, the factors appear to be stable and point to a vital dimension of the cognitive thinking of these students.

The make up of the second factor - "Academic Concerns", differed at the two times of administration. Table 8 shows the difference in the structure, and the only common variable was family encouragement. Nevertheless, the factor obtained at the end of the year appears to be a little more crystallized, with students' concern focused

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TABLE 8

Factor Analysis of Attitudes of Non-Accel Students
(In the Beginning & at the End of the Program)

Items	School Factor		Academic Concerns	
	Beginning	End	Beginning	End
Like School	.65	.62		
Participation in Class	.30	.30		
Interest in School Work	.65	.66		
Concern about Grades	.51			.74
Perception of Self as a Learner	.58			
Study Skills	.42			
Motivation	.56	.68		
Educational Goals				.27
Study Harder Than Peers		.22	.73	
Family Encourage			.56	.27
Enjoy School		.82		
School Work Better Than Peers				.34
RELIABILITY	.72	.71	.56	.32

31

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on grades, educational goals and evaluation of school work. However, the stability of this factor raises questions due to the low reliability at both the times.

As in the case of Accel students, what these results suggest is that the questionnaire may need further refinement. The preliminary factor structures obtained from this study can be used as outlines that can help in the process of refinement of the questionnaire. It may also be important to note here that although school factor emerged as one of the dimensions to focus on, the factor structure is complex and caters to more than one aspect of school. This is another indication that the attitudes measured are complex and the instrument may need refinement both conceptually as well as methodologically.

Although the variables in the factor models were the same for Accel and non-Accel students, the resulting relationships among them as well as the dimensions appeared to be very different. This may have resulted from the differences in the school settings and the nature of the stimuli provided. While Accel students' attitudes suggested three dimensions, even though they were not well differentiated, the non-Accel students' attitudes implied one undifferentiated school factor. This is a major difference that can be a valuable asset for future studies. Once again, caution must be used in interpreting these results due to the low reliability associated with these factors.

Measuring Changes in the Attitudes of Non-Accel Students:

The Accel students showed a definite change in their attitude towards school after experiencing learning in a very supportive environment. It was of interest to know if there were any similar changes in the attitudes of students who did not encounter any modifications in their traditional school setting. The t-tests carried out to analyze these differences showed that there were changes in two areas of school activities. Table 9

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TABLE 9

Differences in the Attitudes of Non-Accel Students in the Beginning and at the End of the Program on Some Key Issues

Item	Beginning Mean	End Mean	Difference (Mean)	T-Value	Significance
Like School	4.01	3.96	-.05	.62	.54
Like Teacher	4.09	4.11	-.02	.21	.83
Interest in School Work	4.06	3.98	-.08	.93	.35
Concern about Grades	4.60	4.42	-.18	2.34	.02*
Perception of Self as a Learner	3.58	3.37	-.21	2.36	.02*
Motivation	3.12	3.05	-.07	.90	.37

* Denotes Significant Difference at .05 Level.

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displays the results of the analyses. Significant changes were noticed with regard to concerns for getting good grades and their self evaluation as learners. However, these changes were not in the positive direction. A closer look at the means show that, in all the key areas, there was a downward trend in the attitude. What this implies is that students' attitudes and perceptions about school and school activities depreciated over the school year.

Specifically, their concern about getting good grades went down. A reasonable explanation to this may be the disinterest of students regarding learning. This measurable decline could be a reflection of students' dissatisfaction with the school environment which might have resulted in indifference towards getting good grades. This was further corroborated by the percentage of students who reported about their level of concern regarding grades. While in the beginning of the year, 92.9% of the students were concerned about their grades, by the end of the year, only 58.4% of the students showed concern.

A further justification to this trend was supported by students' conception of themselves as learners. There was a significant decline in their rating of themselves as good or great students. While almost 50% of the students proclaimed themselves to be great or good students in the beginning of the year, by the end of the school year, only 26% of students felt the same way. Once again, this might be the result of feelings of alienation and detachment from school.

These findings are very different from the ones obtained for Accel students. Although Accel students did not show significant improvement in attitudes with regard to many key issues, there wasn't any major decline in their attitudes over the school year. However, with the non-Accel students, there appears to be a definite, decline in

34

their rating of school and related activities. A subsequent comparison of Accel and non-Accel students' attitudes would elucidate if differences seen can be attributed truly to the program effect.

Association Between Liking School and Teachers and Some Key Issues:

The above results clearly delineated the attitudes of students towards school activities. It is well known that attitudes are products of one's experiences. Hence, it would be crucial to see if students' attitudes towards school and teachers, in general, had any bearing on their motivation levels or concerns about important school activities. Table 10 illustrates the association between certain indispensable variables and liking school or teachers. It is clear from the Table that the relationships did not stay constant over the period of the school year, but actually changed over time.

Participation in the classroom activities was not viewed as related to liking teachers (.11) or school (.10) in the beginning of the year. Nevertheless, by the end of the year, those students who liked school did participate more in class room activities (.28) than those who liked teachers (.17). On the other hand, interest in school work was positively related to liking teachers and liking school in the beginning and at the end of the year.

Although in the beginning of the year, students' concerns regarding grades were positively associated with liking school (.25) and liking teachers (.31), by the end of the year, liking school (.22) did not show any significant relationship with students' concern for grades. On the contrary, liking school had a positive relationship with self evaluation as learners (.26). However, there was no significant association between liking teachers (.19) and students' self evaluation as learners.

Motivation levels of students can be a consequence of their appreciation for

35

TABLE 10

Association Between Non-Accel Students' Feelings about Teachers, and School and Concerns on Certain Key Issues (In the Beginning & at the End of the Program)

Items	In the Beginning		At the End	
	Like School	Like Teachers	Like School	Like Teachers
Participation in Classroom	.11	.10	.28*	.17
Interest in School Work	.38*	.23*	.36*	.48*
Concern About Grades	.25*	.31*	.22	.48*
Perception of self as a Learner	.30*	.42*	.26*	.19
Motivation	.40*	.14	.44*	.39*
Goal Setting	—	—	.06	.03

* Denotes Significant Relationship at .05 Level.

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teachers and schools. Table 10 shows that in the beginning of the year motivation level was associated only with liking school. However, towards the end of the year motivated students were more inclined to like the school and their teachers. We may speculate here that liking school and teachers might contribute to their interest in school which in turn might motivate them to do well in school. Unlike the Accel students, motivated non-Accel students do not seem to set goals irrespective of their liking for school or teachers. This may be a vital difference between Accel and non-Accel students that needs mentioning. In a non-traditional setting bound by contractual agreement and a systematic way of learning, students also learn to set achievable goals, whereas, in a traditional environment, students may not be encouraged to develop such qualities.

Accel vs Non-Accel Students

The results described above reflect the differences between Accel & non-Accel students in the structure of their attitudes and perceptions. However, differences were seen within the context of the program they were involved in. Although, such differences to some extent discriminate between Accel and non-Accel students, the results seen may be confounded with the cognitive development of the students involved. A better way to disentangle this would be to compare and evaluate the experiences of these students in the two distinct settings. This would allow us to answer one of the most fundamental questions, whether, experiences in a non-traditional setting that is supportive and rewarding can help reshape the attitudes of students.

In order to answer this question, a series of t-tests comparing the attitudes of Accel and non-Accel students at the end of the school year was conducted. The differences seen then could allow us to determine whether or not the Accel program

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significantly impacted student attitudes. As was done with the initial analyses, differences in the means of the attitudes of Accel and non-Accel students were calculated.

Table 11 presents the results of these analyses. There was a significant difference in the attitudes of the two groups of students in appreciating and liking school. Students from the Accel program appeared to have liked their school better than their non-Accel counterparts. This may be due to the fact that Accel students experienced school related activities in a non-traditional environment and as a result might have actually enjoyed and developed a liking for the school. However, this positive change towards school did not have any impact on their liking for teachers. As far as the teachers were concerned, there weren't any notable differences between Accel and non-Accel students. Nevertheless, a closer look at the means for the two groups revealed that the mean of the Accel group (4.23) was higher than that of the non-Accel (4.12) group. (This may be construed as a better relationship between the Accel teachers and students as a consequence of the smaller class size.)

Although the two groups of students did not differ from one another in their assessment of motivation levels and their interest in school work, there was a significant positive shift in the self-perception of Accel students as learners. In other words, Accel students reported a better view of themselves as learners as opposed to students who were educated in a traditional school setting. As a corollary effect, Accel students' concern for getting good grades was also significantly higher (4.71) than that of the non-Accel students (4.42). Being in a non-traditional environment that boosted their self image and a more interesting school environment could have contributed to these changes in attitudes.

Along with these positive effects, Accel students also tend to establish higher

TABLE 11

A Comparison of the Attitudes of Accel Students and Non-Accel Students at the End of the Program on Some Key Issues

Item	Accel Mean	Non Accel Mean	Difference (Mean)	T-Value	Significance
Like School	4.13	3.96	0.17	2.02	.04*
Like Teacher	4.23	4.12	0.11	1.13	.26
Interest in School Work	4.15	3.99	0.16	1.69	.09
Concern about Grades	4.71	4.42	0.29	2.99	.00*
Perception of Self as a Learner	3.65	3.36	0.29	2.90	.00*
Motivation	3.08	3.05	0.03	.43	.67
Goal Setting	2.66	2.30	0.36	5.37	.00*

* Denotes Significant Difference at .05 Level.

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educational goals than their counterparts. A mean difference of .36 was found between the two sets of students, in favor of the Accel students. In following through the logic, one can say that renewed interest in school and related activities might have impacted positively on aspirations.

A second set of analyses were also conducted to discern differences in attitudes on the basis of gender, grade and ethnic affiliations. The study conducted last year, showed the program to have impacted differently on these groups. Results from this year's analyses are presented in Table 12. Previously, we noted that the Accel students' attitudes towards liking school, grades and goal setting were positive. In addition, when a comparison of attitudes of sixth and seventh graders were examined, seventh graders appeared to evaluate themselves as better learners (3.63) than sixth graders (3.39).

There were differences in the attitudes of students towards teachers, as a function of school affiliation. Comparing the mean attitude scores of these groups showed that students from Thirteenth Avenue liked the teachers best (4.41). Similarly, students' attitudes towards setting goals also differed in these schools. Students from Maple showed the highest average (2.62), followed by Bergen. There were no significant ethnic differences regarding attitudes on these issues.

However, males differed from females regarding interest in school work, concern about grades, and their view of themselves as learners. Consistently, females showed more interest in their school work (4.24) and were more concerned about getting good grades than males (4.71). As a consequence, we also see that females' self assessment of themselves as good learners (3.66) was higher than that of males (3.43).

The above discussion only tells us that there were differences between schools with regard to liking teachers. In order to find out in depth the true differences in the

40

TABLE 12

Distribution of Means on Key Issues by Group
(Accel vs Non Accel) Grade, School, Gender and Ethnicity

ITEM	GROUP		GRADE		GENDER		SCHOOL				ETHNICITY	
	Accel	Non Accel	6th	7th	Male	Female	1**	2**	3**	4**	Blacks	Hispanics
Like School	4.13*	3.96	4.02	4.10	4.0	4.12	4.03	4.08	4.09	4.07	4.05	4.08
Like Teacher	4.23	4.12	4.11	4.25	4.11	4.28	4.18	4.11	4.02	4.41*	4.22	4.05
Interest in School Work	4.15	3.99	4.08	4.09	3.96	4.24*	4.06	4.11	4.11	4.07	4.11	4.0
Concern about Grades	4.71*	4.41	4.56	4.60	4.48	4.71*	4.49	4.58	4.77	4.53	4.57	4.69
Perception of Self as a Learner	3.65*	3.35	3.39	3.63*	3.43	3.66*	3.46	3.65	3.55	3.43	3.54	3.54
Motivation	3.08	3.05	3.04	3.09	3.02	3.12	3.05	3.14	3.06	3.02	3.06	3.08
Goal Setting	2.66*	2.31	2.48	2.54	2.48	2.56	2.55	2.62*	2.46	2.41	2.53	2.46

* Denotes Significant Differences at .05 Level.

** 1 = Bergen, 2 = Maple, 3 = McKinley, & 4 = Thirteenth Ave.

41

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TABLE 12A

Differences in the Means of Students in the Four Schools on Two Key Issues

Schools	Like Teachers	Goal Setting
Bergen vs Maple	0.07	0.07
Bergen vs McKinley	0.16	0.09
Bergen vs Thirteenth Ave	0.23	0.14
Maple vs Mckinley	0.09	0.16
Maple vs Thirteenth Ave	0.30*	0.21*
McKinley vs Thirteenth Ave	0.39*	0.05

* Denotes Significant Differences at .05 Level.

64

63

attitudes of the students from different schools, a post-hoc test of Least Significant Difference (LSD), was performed. This is a multiple comparison test that allows one to determine whether means for the variables under consideration are in fact different. The results of these analyses are presented in Table 12A. Although four schools were involved, significant differences were found between only two schools. Students from Thirteenth Avenue had more positive sentiments towards their teachers than students from Maple and McKinley. One may infer here that both Accel and non-Accel students liked teachers from Thirteenth Avenue.

Similarly, the only significant school difference regarding goal setting was found between Thirteenth Avenue and Maple. However, in this particular instance, students from Maple had a higher mean (2.62) than students from Thirteenth Avenue (2.41). What this implies is that, at the end of the year, students from Maple had higher educational goals than their counterparts from Thirteenth Avenue.

In order to further delineate the differences based on their program, sex, and grade affiliations, interaction effects of the variables were also studied. So far, the results presented mainly addressed the differences between schools on certain issues. However, we may find that gender or grade differences exist between Accel and non-Accel program, on some of the key issues. Such differences can be established with the help of interaction studies. Table 13 illustrates some of these significant differences.

When we studied these interaction effects, significant interactions were found between motivation levels and grade, for Accel and non-Accel students. However, the post hoc tests were not able to provide any significant differences between Accel and non-Accel students' motivation levels in sixth or seventh grades. There were also no systematic differences between the sixth and seventh graders' motivation levels within

43

TABLE 13

Distribution of Means on Some Key Issues -
Significant Interaction Effects - Group[+] by Grade and Group by School

Item	GROUP BY GRADE		GROUP BY SCHOOL			
	6th Grade	7th Grade	Bergen	Maple	McKinley	Thirteenth Ave
LIKE TEACHER						
Accel			4.42	4.12	3.92	4.55
Non Accel			3.94	4.10	4.50	4.26
Difference			0.48*	0.02	-0.58	0.29
MOTIVATION						
Accel	2.96	3.15				
Non Accel	3.12	2.98				
Difference	-0.16	0.17				
GOAL SETTING						
Accel	2.60	2.70				
Non Accel	2.35	2.27				
Difference	0.25*	0.43*				

+ Group - Accel vs. Non-Accel

* Denotes Significant Differences at .05 Level.

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their respective program settings. While there may be other differences which might have resulted in a significant interaction effect, it may not be meaningful to pursue them for the purpose at hand.

Nevertheless, goal setting of students appear to be related to the program status and grade level. At both the sixth and seventh grades the educational aspirations of the Accel students were significantly higher than the non-Accel students.

Analogous to these results, there were also significant interaction effects between Accel and non-Accel groups and schools on the issue of liking teachers. However, the post-hoc tests exhibited only one significant difference. Accel students at Bergen Street appear to like their teachers much more than the non-Accel students in the same school. In the other schools, students' liking for their teachers was not contingent upon the school or program in which they were enrolled. However, in Bergen, Accel teachers seem to have made an impact on their students' attitudes.

In conclusion, one may assert that overall, project Accel appears to have had a positive impact on students' liking for school and concern about getting good grades. The experiences in a non-traditional environment have also contributed to their self image and helped further to shape their educational plans. Comments made by these students about Project Accel also attest to these sentiments. Students have stated that "Project Accel is excellent, ... better, ... good". Other facets of the program that students appeared to have appreciated were 'encouragement from teachers, learning more and learning new things, working harder........, and the advantages associated with the program'. These sentiments echoed by a large number of students reflect the shift in the attitudes of students towards the value of learning. Perhaps, the very idea of being

selected to skip a grade might have also influenced their views on learning and their appreciation of school.

Parental Perception of Accel Program

Along with teachers' and students' attitudes about Accel, parents' views were also explored. This would give us another perspective from which we could evaluate the effectiveness of the program and its impact on students' attitudes and behavior. Although 185 students were involved in Project Accel, only 131 parents answered the surveys. Parents were asked to assess not only the changes they noted with their youngsters, but also the changes in their attitudes and behaviors.

As a preliminary step, a factor analysis carried out resulted in two factors, one with five variables and the other with one variable. The results are presented in Table 14. Greater interest in school work, studying harder at home than before, more motivation, and doing better in school than before were the four variables that constituted a factor that can be named "progress". The reliability of this factor was also high (.80) confirming the stability of this factor. The content of this factor very clearly points to the constructive behavior changes in the student as perceived by the parent.

On the other hand, since the second factor was made of only one variable which measured the parents' increased interest in the student, it is not presented in the table. However, this denotes the other dimension in the survey that deals with parents' assessment of their behavior as a result of child's participation in the Accel project. Parallel to these findings, the percentage of parents who felt that they know more about the progress of their child was also high (66%). However, a slightly lower percentage (56.5%) hoped that their child will earn a college degree. Overall, the parents' perception of their children's behaviors appears to be positive, and 67.2% of them

perceive their youngsters to be doing better in school as a result of their involvement in

Project Accel.

TABLE 14

Factor Analysis of Parental Perceptions and Their Assessment

Item	Progress	Percent Agreeing
Child is More Interested in School Work	.85	67.2%
Child Studies Harder	.57	55.0%
Child is More Motivated	.78	64.9%
Child is Doing Better in School	.64	67.2%
RELIABILTY	.80	

47

CHAPTER 4

Academic Achievement

The analyses of the perceptions and attitudes of students, parents, and teachers presented in the previous chapters, revealed the overwhelmingly positive influence of the program on students. Although these results are important in determining the success of the Accel program, a more important criterion would be to determine if the project has any positive impact on the academic achievement of the students. The goal of this project is to accelerate the learning process of retained students, so that at the end of the school year, these students would be able to skip a grade. In the contract signed by students, one of the stipulations for skipping a year was that students should pass their assessment tests in reading and mathematics at their current grade level and at least two of the tests at the next grade level. The ensuing discussion focuses on students' progress with the quarterly assessments, as well as their performance on the standardized test.

Progress in the Core Academic Areas of Reading and Mathematics

Quarterly Assessments in Reading:

Students were tested four times in a school year by a reading assessment instrument. This test is a criterion-referenced measure of mastery of students' reading skills. The level of mastery is determined by a score of 75% in reading. However, students were given several chances to attain this level of mastery, that is, students were allowed to retake the test several times. Accel students were administered all the four tests for their respective grade levels. In addition, they were also given assessment tests at the next grade level.

TABLE 15

Percentage of Students Passing Quarterly Assessment Tests
in Reading during 1991-1992 Academic Year

QUARTER*	6TH GRADE				7TH GRADE			
	1	2	3	4	1	2	3	4
BERGEN								
Pass	87.0	82.6	73.9	73.9	76.0	72.0	64.0	60.0
Fail	—	4.3	8.7	13.0		4.0	16.0	20.0
MAPLE								
Pass	78.3	82.6	95.7	65.2	45.8	70.8	87.5	91.7
Fail	8.7	17.4	4.3	34.8	45.8	29.2	12.5	8.3
MCKINLEY								
Pass	57.1	52.4	81.0	66.7	78.3	82.6	91.3	95.7
Fail	33.3	38.1	9.5	19.0	21.7	17.4	8.7	4.3
THIRTEENTH AVE								
Pass	33.3	33.3	53.3	60.0	84.6	84.6	65.4	61.5
Fail	40.0	53.3	33.3	6.7	15.4	15.4	34.6	34.6

* Table does not include missing data.

72

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Tables 15, 17, and 17A contain information on the percentage of students passing or failing these tests. The missing data is not included in the table. The information is broken down by school and grade levels. At the sixth grade level, Maple and Bergen appeared to have a greater number of Accel students passing the reading assessment tests as opposed to students at McKinley and Thirteenth avenue. Especially, at Thirteenth avenue, the results from the first three quarters showed a large proportion of students failing the tests. However, the seventh graders, from the same school showed better reading skills with a greater proportion of these students passing the assessment tests. In general, it appeared that seventh graders' reading skills were far better than those of the sixth graders.

Tables 17 and 17A illustrate the performance of students at the next grade level. For example, 40% to 46% of sixth graders passed their seventh grade tests in reading. On the contrary, a greater percentage of seventh graders passed their eighth grade test (56% to 76%). However, the result should be treated with caution, due to the high incidence of missing data with the sixth grade students.

Quarterly Assessment in Mathematics:

Table 16 displays the results of quarterly assessment tests in mathematics. Like the assessment instrument in reading, this is also a criterion referenced instrument that evaluates students' mathematics skills. A score of 65% determines the mastery level of students. Unlike reading, a large proportion of students in sixth grade appear to have passed this test. Although a similar pattern was also seen with the seventh graders, seventh grade students from thirteenth Avenue did very poorly in their fourth quarter. Approximately, 61.5% of these students did not pass this test as opposed to 0% to 8% of students from the other three schools.

TABLE 16

Percentage of Students Passing Quarterly Assessment Tests
in Math during 1991-1992 Academic Year

QUARTER*	6TH GRADE				7TH GRADE			
	1	2	3	4	1	2	3	4
BERGEN								
Pass	69.6	21.7	60.9	69.6	80.0	28.0	64.0	76.0
Fail	13.0	65.2	26.1	17.4	4.0	56.0	20.0	8.0
MAPLE								
Pass	78.3	78.3	73.9	87.0	95.8	79.2	54.2	75.0
Fail	8.7	13.0	4.3	4.3	4.2	20.8	8.3	8.3
MCKINLEY								
Pass	71.4	52.4	90.5	85.7	95.7	87.0	91.3	91.3
Fail	9.5	38.1	4.8	—	4.3	13.0	8.7	—
THIRTEENTH AVE								
Pass	40.0	66.7	80.0	80.0	73.1	61.5	76.9	19.2
Fail	46.7	13.3	—	—	19.2	26.9	23.1	61.5

* Table does not include missing data.

51

75

76

TABLE 17

Percentage of Sixth Graders Passing Seventh Grade Assessment Tests in Reading and Mathematics

QUARTER	Reading				Mathematics			
	1	2	3	4	1	2	3	4
Pass	43.9	43.9	46.3	42.7	47.6	37.8	40.2	36.6
Fail	8.5	8.5	2.4	6.1	14.6	14.6	13.4	14.6
Missing Data	47.6	47.6	51.3	51.2	37.8	47.6	46.3	48.8

TABLE 17A

Percentage of Seventh Graders Passing Eighth Grade Assessment Tests in Reading and Mathematics

QUARTER	Reading				Mathematics			
	1	2	3	4	1	2	3	4
Pass	72.4	76.5	73.5	56.1	78.6	75.5	27.6	31.6
Fail	18.4	11.2	5.1	19.4	12.2	12.2	17.3	10.2
Missing Data	9.2	12.2	21.4	24.5	9.2	12.2	55.1	58.2

52

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Thirty five to forty seven percent of students in the sixth grade passed their seventh grade math assessment tests. This percentage is similar to the one obtained for the reading skill area. However, the seventh graders showed greater difference in their passing rate. While close to 75% of the students passed their first two quarters, this percentage dwindled down to 30% by the end of fourth quarter.

Accel and Non-Accel Students' performance on the Stanford Achievement Test of Basic Skills

Students in the Newark School district were tested with the Stanford eighth edition series at the end of the school year. This provides information on the academic progress of students in the District relative to other students in the nation. It also provides the basis for placement of students in the Basic Skills remedial program. The following discussion focuses on the performance of students in the three basic skill areas, namely, reading, mathematics, and language. At the outset, effects of school and grade affiliation on the academic achievement of Accel students will be studied. Since Project Accel was introduced in two new schools, the differences between the old and the new schools may throw light on the effectiveness of the program in different schools. In addition, a comparison of performance of Accel and non-Accel students on the Stanford achievement test will also be examined. This would unequivocally measure the effectiveness of Project Accel.

Effects of School, Grade, Gender and Ethnic Affiliation on Accel Students' performance on the Stanford:

Last year (1990-1991), Accel project existed in only two schools, namely, McKinley and Thirteenth Avenue. In the 1991-1992 academic year the program was extended to two additional schools, Bergen Street and Maple. A natural query would be

to study the effectiveness of the program in the old and new schools. Earlier chapters have alluded to some of the significant differences among the schools. In order to investigate whether these differences were also relevant in the context of achievement, an Analysis of Covariance was carried out. Sometimes, when the performances of students are compared, the results may be tainted by preexisting differences. One way to circumvent this problem is to control for those preexisting differences, by using Analysis of Covariance which controls for these preexisting differences. The ensuing results presented in Table 18 reflect the posttest performance of students in the three basic skills areas after controlling for the preexisting (pretest scores) differences.

Although differences in Accel students' performance based on grade, gender, ethnic background, and schools were considered, it is apparent from Table 18 that statistically significant differences were found only with regard to school affiliation. Also, these systematic school differences were found only in two of the three academic areas, namely, mathematics and language. While these results indicate that there were systematic differences in the performance of students in the four schools, they do not clearly state which schools were different from one another. Therefore, post hoc tests (LSD) were carried out to discern the school differences. Table 18A illustrates the significant pairwise comparisons of schools.

In the area of mathematics, students from Bergen Street performed better than students from 'Maple and Thirteenth Avenue. Differences were in the order of 14.87 NCE* points and 5.80 NCE points respectively. While students from McKinley and Thirteenth Avenue scored better than their Accel counterparts from Maple, students from McKinley outperformed those from Thirteenth Ave (a difference of 9.20 NCEs). In all, among all the Accel students, students from Maple seem to have scored significantly

TABLE 18

Distribution of the Means[+] in the Basic Skills Areas by School, Grade Level, Gender and Ethnicity (Accel Students)

Basic Skill Area	SCHOOL				GRADE		GENDER		ETHNICITY	
	Bergen	Maple	Mckinley	Thirteenth	6th	7th	Male	Female	Blacks	Hispanics
Reading	39.11	30.54	38.03	36.53	36.18	36.73	38.58	34.32	35.26	39.82
Math	47.91*	33.04	51.55*	42.33*	42.54	46.61	46.83	42.90	42.87	50.70
Language	39.66*	30.99	40.80*	41.29*	37.96	39.47	39.96	37.32	37.44	42.04

TABLE 18A

Differences in the Means of Students in Math & Language by School

Schools	Mathematics	Language
Bergen vs Maple	14.87*	8.67*
Bergen vs McKinley	3.62	1.14
Bergen vs Thirteenth Ave	5.08*	1.63
Maple vs Mckinley	18.49*	9.81*
Maple vs Thirteenth Ave	9.29*	10.3*
McKinley vs Thirteenth Ave	9.20*	0.49

* Denotes Significant Differences at .05 Level.

+ Normal Curve Equivalent Scores (NCES)

81

82

lower (33.04 NCEs) than their counterparts from the other three schools in mathematics. However, we should be careful in drawing conclusions about the performance of these students from Maple. These students, unlike their cohorts from the other three schools were tested one grade level above their present placement. That is, the sixth graders were given seventh grade Stanford test, and the seventh graders were tested with the eighth grade Stanford test. This may explain the relatively lower performance levels of students from Maple.

There were only three significant pairwise comparisons found in the area of language. Students from Bergen had a posttest mean which was significant higher than that of the students from Maple (8.67 NCE points). Similarly, the scores from McKinley (40.80 NCEs) and Thirteenth Ave. (41.29 NCEs) were significantly higher (9.81 & 10.3 NCE points respectively) than the scores from Maple (30.99 NCEs). Once again, we see a pattern with students from Maple scoring lower than students from the other three schools. However, the results obtained here may not be reflective of the true nature of the performance of students from Maple, due to the reason cited previously.

In general, among the two new schools, Bergen Street appears to have the higher performance levels in mathematics and language. Among the two old schools, students from McKinley appeared to have benefitted more in the area of mathematics.

A Comparison of the Effects of School, Grade, Gender and Ethnic Affiliation on Accel and Non-Accel Students' Performance on the Stanford

The above results compared the performance of Accel students on the achievement tests in the three basic skills areas. The results indicate, to a certain extent, the effectiveness of the Accel program. However, such results are confounded by the fact that all those students received education in the same environment and that measurements

were taken on the same students. In order to clearly delineate the effects of the Accel program, the achievement results of Accel students were compared to that of their non-Accel counterparts from the same schools and grades. This comparison can nullify the confounding effects and provide us with a truer picture of the effectiveness of Project Accel.

Table 19 provides the results from the analyses of covariance where students' pretest scores were controlled to negate any preexisting differences among Accel and non-Accel students. The overall results indicate that there were no substantive grade or gender differences with regard to achievement. There were also no interaction effects between grade, gender, school, and being in the Accel program.

However, significant differences in the performance of students were detected with regard to school and ethnic affiliation. Also, there were significant differences in the scores of Accel and non-Accel students in two out of three areas of the basic skills achievement tests. Accel students' reading and language skills were significantly higher than that of the non-Accel students. In the area of reading, Accel students scored 11.36 NCE points higher than non-Accel students. In the area of language, the difference in the posttest means was 12.26 NCEs (see Table 19). The differences observed in these two areas can be attributed primarily to the effects of Project Accel, especially due to the fact that preexisting differences between these two groups have been controlled for. Although, Accel students scored 14.04 NCE points higher than non-Accel students in the area of mathematics, this difference was not statistically significant. Nevertheless, the higher scores exhibited by Accel students indicate a positive trend in the performance of Accel students in the area of mathematics.

Systematic differences between schools were noted only in the area of

TABLE 19

Distribution of the Means of Accel and Non-Accel Students (Group) in Reading, Math and Language by School, Grade Level, Gender and Ethnicity

Basic Skill Area	GROUP		GRADE		GENDER		SCHOOL				ETHNICITY	
	Accel	Non Accel	6th	7th	Male	Female	Bergen	Maple	McKinley	13th Ave	Blacks	Hispanics
Reading	36.65*	25.29	31.05	31.85	31.73	30.79	30.83	29.84	36.17	30.07	30.07	37.26
Math	44.57	30.53	35.96	40.70	38.78	37.89	38.74*	34.82	48.45*	33.63	36.61	47.21*
Language	38.82*	26.56	32.42	34.16	33.31	33.01	33.14	30.62	38.08	32.02	32.06	38.60

TABLE 19A

Differences in the Means of Accel and Non-Accel Students in Math by School

Schools	Differences in Mean
Bergen vs Maple	3.92*
Bergen vs McKinley	9.71*
Bergen vs Thirteenth	5.11*
Maple vs McKinley	13.63*
Maple vs Thirteenth	1.19
McKinley vs Thirteenth	14.82*

* Denotes Significant Differences at .05 Level.

86

85

mathematics. Post-hoc tests were again performed to delineate these differences. Table 19A provides the results of post hoc analyses. Overall, students from McKinley performed much better than students from all other schools. The next higher post mean score was observed with Bergen Street. In all, Students from Bergen Street (new school) and McKinley (old school) appear to have performed better than others in the achievement tests.

The findings pertaining to ethnic status of Accel and non-Accel students reveal no substantive differences between blacks and hispanics except in the area of mathematics. In this skill area, hispanic students scored higher (47.21 NCEs) than black students (36.61 NCEs).

Although school and ethnic differences were found in the area of mathematics, these results by themselves do not answer the fundamental question concerning the effectiveness of project Accel. However, a closer look at the interaction effects can discern the true differences in student performances and school or ethnic affiliation. The results of the interaction studies showed that substantial interaction effects were found between school affiliation and being or not being in the Accel program. No other interaction effects were significant. What these results suggest is that performances of students in different schools were dependent on the program to which the students belonged. Interaction effects were consistently found in all the three basic skills areas.

Table 20 illustrates the results of interaction effects between school and program. In the area of reading, Accel students outperformed their non-Accel counterparts in Bergen, McKinley and Thirteenth Avenue (see Figure 1). The differences ranged between 10 to 15 NCE points. These results clearly denote the impact of Project Accel in improving the reading skills of students. Similar results were also obtained for

59

TABLE 20

Distribution of the Means of Accel & Non-Accel Students
Significant Interaction Effects - School by Group (Accel & Non-Accel) in
Reading, Language and Math

	Bergen	Maple	McKinley	Thirteenth
READING				
Accel	39.11	30.54	38.03	37.19
Non-Accel	23.38	29.22	27.41	23.78
Difference	15.73*	1.32	10.62*	13.41*
MATHEMATICS				
Accel	47.91	33.04	51.53	41.97
Non-Accel	30.48	36.37	31.52	26.28
Difference	17.43*	-3.33	20.01*	15.69*
LANGUAGE				
Accel	39.66	30.99	40.80	41.48
Non-Accel	27.67	30.28	23.12	23.46
Difference	11.99*	0.71	17.68*	18.02*

* Denotes Significant Differences at .05 Level

DISTRIBUTION OF MEANS*
BY SCHOOL
FIGURE 1

READING

MATHEMATICS

LANGUAGE

NON-ACCEL   ACCEL

BERGEN   MAPLE   MCKINLEY   13TH AVENUE
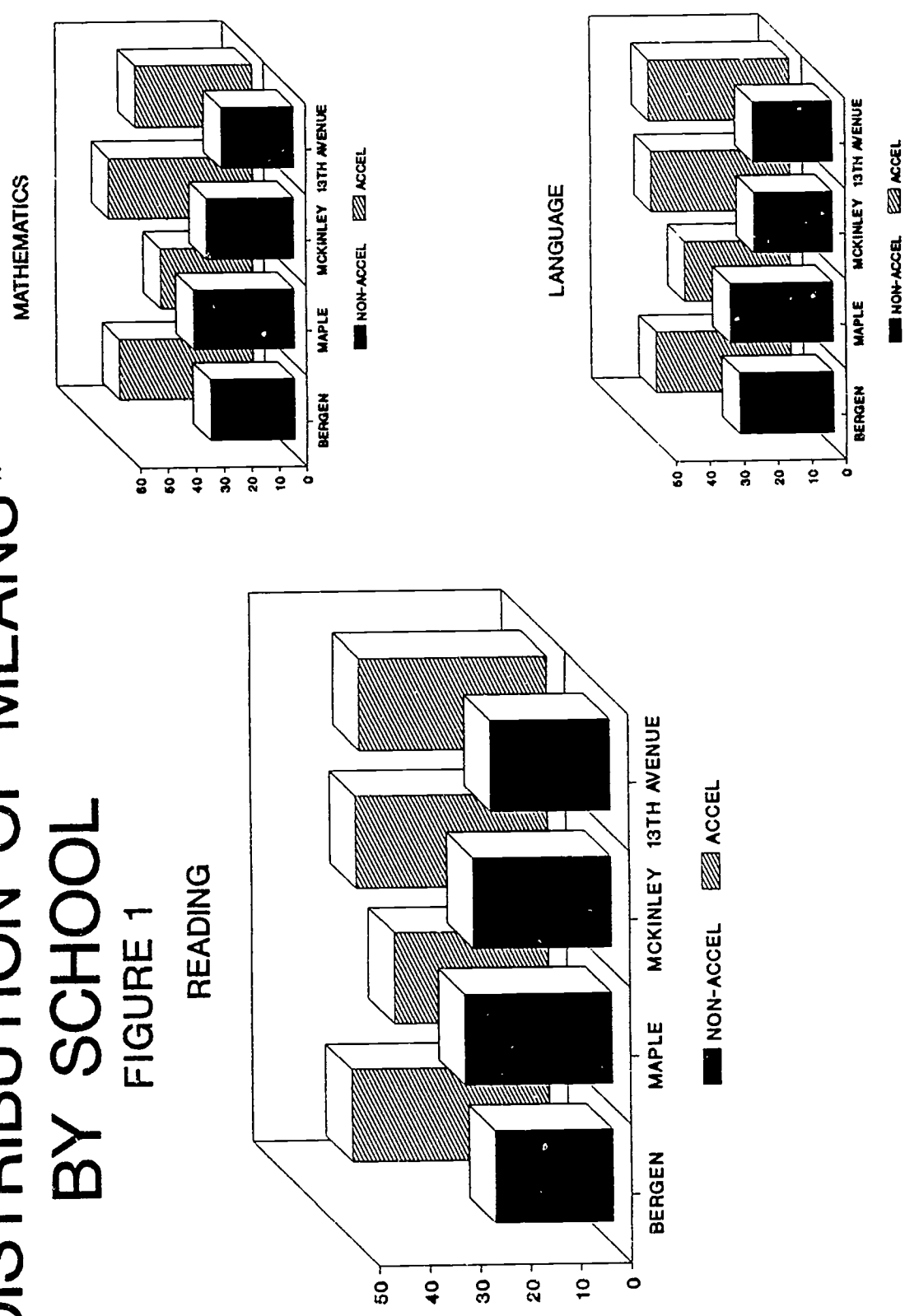
* STANFORD SCORES - NCES

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Mathematics skill area. Accel students consistently had higher scores than their non-Accel counterparts in all the three schools. Although, Maple appears to be the only school where involvement in Accel did not produce the desired outcome in any of the three basic skills areas, it has to be borne in mind that these students took a higher level test. In summary, one can assert that Accel students performed better than non-Accel students in all the three areas of basic skills.

Another measure of student achievement would be the percentage of students who scored above the cutoff in the Stanford Achievement test. The results are presented in Table 21. A comparison of the performance of Accel and non-Accel students reveals that, consistently, a higher percentage of Accel students scored above the state cutoff, in all the three basic skills areas (see Figure 2). While, 74% to 88% of Accel students scored above the cutoff, only 18% to 50% of non-Accel students performed well enough to score above the cutoff.

Overall, 22 sixth graders and 75 seventh graders were accelerated in the 1991-1992 school year. Table 22 and Figure 3 present the breakdown by school. In general, more seventh graders than sixth graders appear to have been accelerated. A probable explanation is that the team that determines the promotional policy might have been more stringent with the sixth graders as they can be given another chance to continue in the Accel program in their seventh grade and accelerate to the ninth grade. Thirty eight sixth graders continued in the Accel program and about twenty rejoined the seventh graders in the regular school program. Thirty three seventh graders were sent back to regular eighth grade program.

One of the goals of this study was to determine the impact of the Accel program on the learning process of students. The above results clearly underscore the positive

62

92

TABLE 21

Proficiency Rates of Accel & Non-Accel Students in all the Three Basic Skills Areas

Grades	Accel		Non Accel	
	Sixth	Seventh	Sixth	Seventh
Reading	87.7%	74 %	47.4%	35.5%
Mathematics	74.0%	78.1%	18.4%	36.8%
Language	83.6%	78.1%	50.0%	36.8%

TABLE 22

Number of Students Accelerated by School

Schools	Sixth	Seventh
Bergen	4	15
Maple	17	24
McKinley	0	21
Thirteenth Ave	1	15
TOTAL	22	75

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94

63

PROFICIENCY RATES OF ACCEL
AND NON-ACCEL STUDENTS*

FIGURE 2

GRADE 6
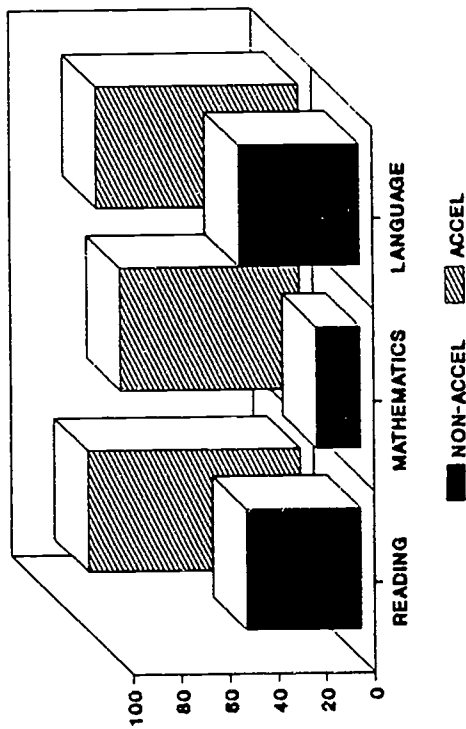
GRADE 7
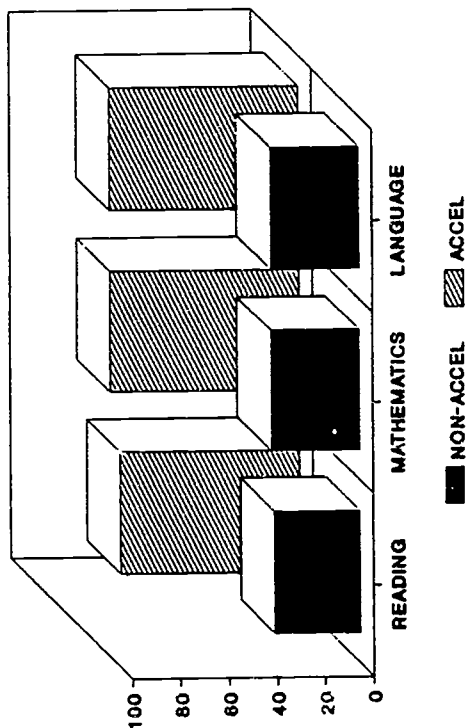
* PERCENTAGE ABOVE CUTOFF

95

96

NUMBER OF ACCELARATED STUDENTS BY SCHOOL

FIGURE 3

BERGEN   MAPLE   MCKINLEY   THIRTEENTH AVENUE

■ 6TH GRADE   ▨ 7TH GRADE

97

98

65
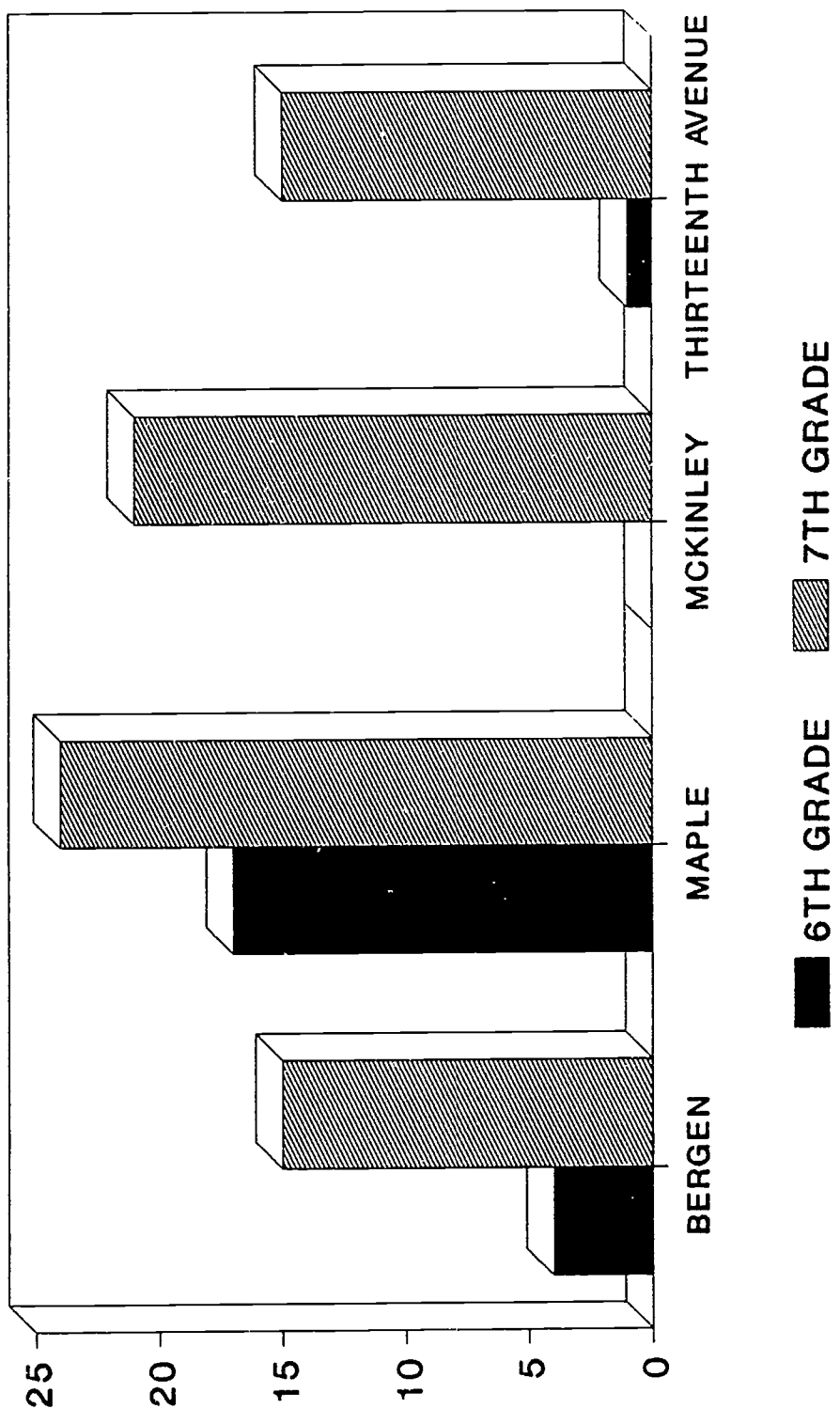
effects of the program in improving the reading and language skills of the students. Although the positive trend in the skill area of mathematics was not significant, it certainly implies improvement of the mathematical skills of Accel students. The results also demonstrate that the differences in the performances of students are a function of school affiliation. Further, the proficiency rates determined by the cutoff scores also attest to the effectiveness of Accel program.

99

CHAPTER 5

Conclusions and Recommendations

The goal of Project Accel was to provide retained students with an opportunity to improve their learning skills in a non-traditional learning environment so that they can successfully skip a grade level above their current grade placement. Such a process would not only improve students' learning abilities but also provide an opportunity for self enhancement. In addition, such an educational process would empower teachers and help build a better relationship between students and teachers. Parental involvement and the feedback from teachers to the students and parents, can also promote the success of this educational process.

Clearly Project Accel appears to have had a positive impact on the attitudes of students towards school and their performance. Although one may argue that the possibility of skipping a grade could have influenced the attitudes of students, the remarks made by students clearly attest to the advantageous nature of the program. Class size has been mentioned by both students and teachers as one of the most important factors in influencing positive attitudes towards the educational process.

This is not surprising, for, researchers have noted that a smaller class size is especially beneficial for 'lower ability' students. The attitudinal changes were further reflected in their liking for school, concern about getting good grades, their perceptions of themselves as learners and goal setting. On the other hand, when changes in the attitudes of non-Accel students were measured, a significant downward trend was noticed with regard to issues such as concern about getting good grades and students' conception of themselves as learners.

100

These results were further corroborated, when differences in the attitudes of Accel and non-Accel students were considered. Accel students from Bergen Street liked their teachers better than their non-Accel counterparts from the same school. At the end of the program, both seventh and sixth grade Accel students were able to set better educational goals than non-Accel students. Again, these changes can be attributed to the effects of being taught in a non-traditional environment, which is conducive to the learning process. Compared to non-Accel students, Accel students showed better liking for school, more concern about achieving good grades, and better self perception as learners. The remarks made by Accel students about Project Accel also reflect the same sentiment. In summary, a positive evaluation has been provided by these students applauding the benefits of the program.

Complementing students' views, teachers involved in Project Accel expressed an overall positive view of the program. However, there were areas where support and reorganization were required. The level of support received from the host school was certainly helpful and good, although, not devoid of administrative problems. Some teachers felt that key individuals such as principals and vice principals lacked in communication skills, which created "confusion". There were also feelings of enmity and hostility towards the Accel teachers by other staff members in the school.

A low student ratio was unequivocally proclaimed by the teachers to be a major advantage in individualizing their attention to the students. Flexibility in schedule was viewed as another beneficial factor. An overwhelmingly positive impact of the program on students' self esteem has also been emphasized by all the teachers. Nevertheless, they do note lack of guidelines regarding screening and exiting students from the program. In conclusion, although, one may interject that the program has been viewed by teachers

68

101

as having great potential, problems mentioned earlier appear to constrain the ability of teachers to function efficiently and implement the program.

Workshops relating to the goals and functioning of Project Accel to the other staff members of the school and key individuals may help alleviate feelings of animosity and enmity among teachers. Providing proper guidelines and greater autonomy to the teachers in the selection and exiting process of students may help in better recruitment of students for Project Accel. Although, use of instructional techniques such as peer tutoring and cooperative learning were helpful, teachers felt that these techniques did not fully assist them in dealing with the increased pacing of the program. Paying more attention to schedule changes and the learning ability of the students, may help resolve problems regarding pacing.

Another critical measure of success of any program is the academic outcome. As far as the quarterly assessments were concerned, most of the participating students (almost 75%) were able to meet the graduation requirements for promotion to the next grade. In addition, while, close to 50% of sixth graders were able to meet the requirements for promotion to two grade levels above their present placement in reading and mathematics, a higher percentage (almost 70%) of seventh graders managed to do the same. Thus, on the basis of the assessment data we may claim that Accel students were successful in reaching their goals.

However, this was not the only criterion that governed promotional policy. In addition to the requirement of passing all the four quarterly assessments at the present grade level and at least two, preferably all four, at the next grade level, students were also required to score above the cutoff on the standardized test. Further, a team of teachers with the guidance counsellor also considered factors such as attendance,

69

participation in the classroom activities, motivation level, and interest in the program, in accelerating a student.

A look at the comparison of the performance of Accel and non-Accel students on the standardized testing revealed that Accel students invariably scored better than their counterparts in all the three basic skills areas. Although in the area of mathematics, the difference was not statistically significant, in the areas of reading and language the skill levels of Accel students were at least 10 NCE points higher than that of the non-Accel students. School affiliation was also significantly associated with growth in the skill areas. Accel students outperformed the non- Accel students in Bergen, McKinley and Thirteenth Avenue, in all the three academic areas. Also, 97 of the 200 Accel students (close to 50%) were accelerated in this academic year.

These results clearly demonstrate the academic achievements of Accel students, and it may not be premature to assert that this program definitely has great potential in fostering the learning of students at-risk. However, in the area of mathematics, Accel students' achievements were not very different from that of the non-Accel students. Perhaps, there is a need to strengthen Accel students' math skills. Teachers and coordinators may need to pay a closer attention to the curriculum and design of the program in this area. Although the program appears to be weak at Maple, (due to the testing of students one grade level above) the record number of students accelerated from this school clears any apprehensions about the effectiveness of the program in this school. A clear, across the board policy regarding the use of a standardized test will be useful for future comparisons of performances in different schools.

While information about group performance provides a crucial perspective of the success of the program, individual triumphs and achievements form an other important

70

aspect. Two such individual achievements are worth mentioning here. An Accel student from Bergen Street has been awarded a $14,000 scholarship to the Gunnery's freshman class in Washington, Connecticut. The same person also won an award for the sum of $5000 from the Wight Foundation, and another student was accepted into the Chad Science Academy of Newark. These achievements of retained students once again confirms the value of learning in a non-traditional environment.

In conclusion, the fundamental principle of the Accel program to raise not only the academic skills of students, but also change and improve the attitude of students, appears to have had a positive effect on the self worth and self esteem of students. The results seen here are encouraging and are testimony to the beneficial nature of this program.

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PROJECT ACCEL: TEACHER INFORMATION SCHEDULE
ON PROGRAM IMPLEMENTATION AND OPERATIONS

Subject _____

School _____

1. Which of the following instructional strategies were used in the
    teaching of this subject and rate how effective you thought it was.
    (VE: very effective, NE: not effective)

		Used	Not Used	5	4	3	2	1
				VE				NE
a.	Peer tutoring	____	____	____	____	____	____	____
b.	cooperative learning	____	____	____	____	____	____	____
c.	homework	____	____	____	____	____	____	____
d.	hands on materaisl	____	____	____	____	____	____	____
e.	affective/ motivational techniques	____	____	____	____	____	____	____
f.	after school instruction	____	____	____	____	____	____	____

2. What are your views about the following organizational features of
    Project Accel and how important do you feel each was to the program

    and why?

Team Teaching:_____

_____

_____

_____

73

106

**Planning
Time:**_____

_____

_____

_____

Teacher/student ratio:_____

_____

_____

Flexibility in Instructional Schedule_____

_____

_____

_____

_____

Staffing_____

_____

_____

_____

Screening/selecting and exiting of students_____

_____

_____

_____

3. The thrust of the program is to move students through two years curriculum in one year. How did you mananage pacing and what difficulties if any did you encounter for this subject area.

    _____

    _____

    _____

    _____

    _____

4. How valuable do you feel the student performance contract was, and why?

    _____

    _____

    _____

    _____

    _____

5. What types of feedback mechanisms did you use with students about their progress?

    _____

    _____

    _____

    _____

108

6. Describe any grouping practices used in this subject area, and the basis on which the groups were formed

_____

_____

_____

_____

_____

7. How were parents involved in the program?

_____

_____

_____

8. Briefly describe the curriculum for this subject area and any instructional approach (including teaching style/philosophy) you used which you feel may be important for us to include in the evaluation report.

_____

_____

_____

_____

_____

_____

_____

_____

_____

9. Are there any characteristics about the student population in Project Accel that made the implementation of the program easy or difficult in this subject area (if there were grade level differences you may note those also).

_____

_____

_____

_____

_____

_____

10. Since Project Accel functioned as a "school within a school" it is important to get some feedback on the relationship of the program to other key individuals within the regular school. For the following individuals below briefly state your opinions on the relationship between Accel staff and or student body (if applicable), and that individual.

a. Building principal _____

_____

_____

_____

b. Vice-Principals _____

_____

_____

_____

c. Teachers _____

_____

_____

_____

_____

77

d. Guidance Counselors_____

_____

_____

_____

_____

e. Students _____

_____

_____

_____

11. In what ways was the guidance component crucial to the program?

_____

_____

_____

_____

12. Are there any problems (in addition to those you may have cited
    previously) you encountered in the implementation of the program

_____

_____

_____

_____

13. Could you contrast your experiences this year as a teacher in Project Accel with your previous experiences (include instructional techniques and interaction with students and colleagues, level of responsibility etc.)

_____

_____

_____

_____

_____

_____

_____

14. Could you describe your perceptions of how participation in PROJECT ACCEl may have affected student self esteem (give examples if helpful).

_____

_____

_____

_____

_____

15. The following blank paper is attached for you to write any other comments you feel is important for us to take into account when putting together the final evaluation report.

Student School Assessment Schedule

Dear Student:

We are interested in finding out your views about school. We are going to ask you a few questions about your experiences. We would like you to answer this questionnaire honestly. There are no right or wrong answers, the important thing to us are your feelings and views.

_____

School: _____

Name: _____

Circle the one that applies to you.

Current Grade: 6   7   8   9

Sex: Female   Male

Race/Ethnic Background: Black   Hispanic

What grade were you in last year?   6   7   8

How old are you?   11   12   13   14   15   16

Have you ever been retained?   Yes   No

....

The following questions are about your feelings on school before you entered Accel. Circle the response that best applies to you. Read the responses very clearly.

1)   a)   I liked school a lot
     b)   I liked school
     c)   I liked school a little
     d)   I disliked school
     e)   I disliked school a lot

2)   a)   I liked my teachers a lot
     b)   I liked my teachers
     c)   I liked my teachers a little
     d)   I disliked my teachers
     e)   I disliked my teachers a lot

3) a) I participated a lot in classroom activities
   b) I participated in classroom activities
   c) I participated a little in classroom activities
   d) I do not participated in classroom activities

4) a) I was very interested in my school work
   b) I was interested in my school work
   c) I was somewhat interested in my school work
   d) I was not interested in my school work
   e) I was definitely not interested in my school work

5) a) I was very concerned about my grades
   b) I was concerned about my grades
   c) I was somewhat concerned about my grades
   d) I was not interested concerned about my grades
   e) I was definitely not concerned about my grades

6) a) I was a great student
   b) I was a good student
   c) I was an O.K. student
   d) I was not too good a student
   e) I was a bad student

7) How much education would you like to get after completing
   high school:

   a) none
   b) vocational or technical training
   c) some college
   d) get an associates degree from a community college
      (e.g. Essex County)
   e) get a bachelors degree from a four year college
      (e.g. Rutgers University)
   f) get a professional degree
      (Doctor, Lawyer, Engineer, etc.)

8) If you were completely free to work at any occupation in the
   world, what would your lifetime job be?

   _____

   _____

   _____

   _____

81

9) Sometimes we cannot get what we want. Taking everything
    into consideration (your abilities, interests,
    opportunities, available money etc.) what job do you really
    expect to have most of your life?

    _____

10) I feel that compared with other students my school work was:

    a) better than theirs
    b) just as good as theirs
    c) just a little bit poorer than theirs
    d) significantly worst than theirs

For the following questions, read each statement and choose the
answer that shows how much you agree or disagree.

11) I found that I had to study harder than other students in my
    class:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

12) Sometimes I had difficulty understanding what my teachers
    said:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

13) I felt that my teachers encouraged me to do well in my
    school work:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

14) I used to enjoy coming to school:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

82

15) I felt that my family encouraged me to do well in my school work:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

16) I was afraid to ask questions during classroom:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

17) I never forgot to do my homework and bring it to school:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

18) How often did you feel that you would rather be doing something else than being in school:

   a) all the time
   b) sometimes
   c) rarely
   d) never

19) How would you rate your study skills then:

   a) excellent
   b) good
   c) fair
   d) poor

20) Circle the statement which best applied to you:

   a) I was very motivated about school and learning
   b) I was motivated about school and learning
   c) I was somewhat motivated about school and learning
   d) I was not motivated about school and learning

Student School Assessment Schedule

Dear Student:

We are interested in finding out your views about school. We are going to ask you a few questions about your experiences. We would like you to answer this questionnaire honestly. There are no right or wrong answers, the important thing to us are your feelings and views.

School: ._____

Name: _____

Circle the one that applies to you.

Current Grade: 6   7   8   9

Sex: Female   Male

Race/Ethnic Background: Black   Hispanic

What grade were you in last year?   5   6   7   8

How old are you? 11   12   13   14   15   16

Have you ever been retained?   Yes   No

. . . .

Read the responses very clearly. Circle the response that best describes how you feel about being in Project Accel.

1)   a)   I like school a lot
      b)   I like school
      c)   I like school a little
      d)   I dislike school
      e)   I dislike school a lot

2)   a)   I like my teachers a lot
      b)   I like my teachers
      c)   I like my teachers a little
      d)   I dislike my teachers
      e)   I dislike my teachers a lot

84

117

3) a) I participate a lot in classroom activities
    b) I participate in classroom activities
    c) I participate a little in classroom activities
    d) I do not participate in classroom activities

4) a) I am very interested in my school work
    b) I am interested in my school work
    c) I am somewhat interested in my school work
    d) I am not interested in my school work
    e) I am definitely not interested in my school work

5) a) I am very concerned about my grades
    b) I am concerned about my grades
    c) I am somewhat concerned about my grades
    d) I am not concerned about my grades
    e) I am definitely not concerned about my grades

6) a) I am a great student
    b) I am a good student
    c) I am an O.K. student
    d) I am not too good a student
    e) I am a bad student

7) How much education would you like to get after completing
    high school:

    a) none
    b) vocational or technical training
    c) some college
    d) get an associates degree from a community college
        (e.g. Essex County)
    e) get a bachelors degree from a four year college
        (e.g. Rutgers University)
    f) get a professional degree
        (Doctor, Lawyer, Engineer, etc.)

8) If you were completely free to work at any occupation in the
    world, what would your lifetime job be?

    _____

9) Sometimes we cannot get what we want. Taking everything
    into consideration (your abilities, interests,
    opportunities, available money etc.) what job do you really
    expect to have most of your life?

    _____

85

10) I feel that compared with other students my school work is:

   a) better than theirs
   b) just as good as theirs
   c) just a little bit poorer than theirs
   d) significantly worst than theirs

For the following questions, read each statement and choose the answer that shows how much you agree or disagree.

11) I feel that I have to study harder than other students in my class:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

12) Sometimes I have difficulty understanding what my teachers are saying:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

13) I feel that my teachers encourage me to do well in my school work:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

14) I enjoy coming to school:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

15) I feel that my family encourages me to do well in my school work:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

16) I am afraid to ask questions during class:

a) strongly agree
b) agree
c) disagree
d) strongly disagree

17) I never forget to do my homework and bring it to school:

a) strongly agree
b) agree
c) disagree
d) strongly disagree

18) How often do you feel that you would rather be doing something else than being in school:

a) all the time
b) sometimes
c) rarely
d) never

19) How would you rate your study skills:

a) excellent
b) good
c) fair
d) poor

20) Circle the statement which best applies to you:

a) I am very motivated about school and learning
b) I am motivated about school and learning
c) I am somewhat motivated about school and learning
d) I am not motivated about school and learning

21) Since I have been in Project Accel I find that:

a) I am setting more educational goals for myself
b) I have not really changed my educational plans
c) I have set fewer educational goals than before

87

22) If someone asked you to compare your experiences in school before you were put in Project Accel and your experiences in Project Accel, what would you say to them?

23) Name three things you like most about Project Accel:

1._____

2._____

3._____

24) You may use the space below for any additional comments.

88

Student School Assessment Schedule

Dear Student:

We are interested in finding out your views about school. We are going to ask you a few questions about your experiences. We would like you to answer this questionnaire honestly. There are no right or wrong answers, the important thing to us are your feelings and views.

School: _____

Name: _____

Circle the one that applies to you.

Current Grade: 6   7   8   9

Sex: Female   Male

Race/Ethnic Background: Black   Hispanic

What grade were you in last year?   6   7   8

How old are you?   11   12   13   14   15   16

Have you ever been retained?   Yes   No

....

The following questions are about your feelings on school. Circle the response that best applies to you. Read the responses very clearly.

1) a) I like school a lot
    b) I like school
    c) I like school a little
    d) I dislike school
    e) I dislike school a lot

2) a) I like my teachers a lot
    b) I like my teachers
    c) I like my teachers a little
    d) I dislike my teachers
    e) I dislike my teachers a lot

89

3) a) I participate a lot in classroom activities
    b) I participate in classroom activities
    c) I participate a little in classroom activities
    d) I do not participate in classroom activities

4) a) I am very interested in my school work
    b) I am interested in my school work
    c) I am somewhat interested in my school work
    d) I am not interested in my school work
    e) I am definitely not interested in my school work

5) a) I am very concerned about my grades
    b) I am concerned about my grades
    c) I am somewhat concerned about my grades
    d) I am not interested concerned about my grades
    e) I am definitely not concerned about my grades

6) a) I am a great student
    b) I am a good student
    c) I am an O.K. student
    d) I am not too good a student
    e) I am a bad student

7) How much education would you like to get after completing
    high school:

    a) none
    b) vocational or technical training
    c) some college
    d) get an associates degree from a community college
        (e.g. Essex County)
    e) get a bachelors degree from a four year college
        (e.g. Rutgers University)
    f) get a professional degree
        (Doctor, Lawyer, Engineer, etc.)

8) If you were completely free to work at any occupation in the
    world, what would your lifetime job be?

    _____

    _____

    _____

    _____

90

9) Sometimes we cannot get what we want. Taking everything into consideration (your abilities, interests, opportunities, available money etc.) what job do you really expect to have most of your life?

_____

10) I feel that compared with other students my school work is:

    a) better than theirs
    b) just as good as theirs
    c) just a little bit poorer than theirs
    d) significantly worst than theirs

For the following questions, read each statement and choose the answer that shows how much you agree or disagree.

11) I feel that I have to study harder than other students in my class:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

12) Sometimes I have difficulty understanding what my teachers are saying:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

13) I feel that my teachers encourage me to do well in my school work:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

14) I enjoy coming to school:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

15) I feel that my family encourages me to do well in my school work:

a) strongly agree
b) agree
c) disagree
d) strongly disagree

16) I am afraid to ask questions during class:

a) strongly agree
b) agree
c) disagree
d) strongly disagree

17) I never forget to do my homework and bring it to school:

a) strongly agree
b) agree
c) disagree
d) strongly disagree

18) How often do you feel that you would rather be doing something else than being in school:

a) all the time
b) sometimes
c) rarely
d) never

19) How would you rate your study skills:

a) excellent
b) good
c) fair
d) poor

20) Circle the statement which best applies to you:

a) I am very motivated about school and learning
b) I am motivated about school and learning
c) I am somewhat motivated about school and learning
d) I am not motivated about school and learning

Student School Assessment Schedule

Dear Student:

We are interested in finding out your views about school. We are going to ask you a few questions about your experiences. We would like you to answer this questionnaire honestly. There are no right or wrong answers, the important thing to us are your feelings and views.

_____

School: _____

Name: _____

Circle the one that applies to you.

Current Grade: 6   7   8   9

Sex: Female   Male

Race/Ethnic Background: Black   Hispanic

What grade were you in last year?   5   6   7   8

How old are you?   11   12   13   14   15   16

Have you ever been retained?   Yes   No

. . . .

The following questions are about your feelings toward school. Circle the response that best applies to you. Read the responses very clearly.

1)   a)   I like school a lot
     b)   I like school
     c)   I like school a little
     d)   I dislike school
     e)   I dislike school a lot

2)   a)   I like my teachers a lot
     b)   I like my teachers
     c)   I like my teachers a little
     d)   I dislike my teachers
     e)   I dislike my teachers a lot

3) a) I participate a lot in classroom activities
   b) I participate in classroom activities
   c) I participate a little in classroom activities
   d) I do not participate in classroom activities

4) a) I am very interested in my school work
   b) I am interested in my school work
   c) I am somewhat interested in my school work
   d) I am not interested in my school work
   e) I am definitely not interested in my school work

5) a) I am very concerned about my grades
   b) I am concerned about my grades
   c) I am somewhat concerned about my grades
   d) I am not concerned about my grades
   e) I am definitely not concerned about my grades

6) a) I am a great student
   b) I am a good student
   c) I am an O.K. student
   d) I am not too good a student
   e) I am a bad student

7) How much education would you like to get after completing high school:

   a) none
   b) vocational or technical training
   c) some college
   d) get an associates degree from a community college (e.g. Essex County)
   e) get a bachelors degree from a four year college (e.g. Rutgers University)
   f) get a professional degree (Doctor, Lawyer, Engineer, etc.)

8) If you were completely free to work at any occupation in the world, what would your lifetime job be?

   _____

9) Sometimes we cannot get what we want. Taking everything into consideration (your abilities, interests, opportunities, available money etc.) what job do you really expect to have most of your life?

   _____

10) I feel that compared with other students my school work is:

   a) better than theirs
   b) just as good as theirs
   c) just a little bit poorer than theirs
   d) significantly worst than theirs

For the following questions, read each statement and choose the answer that shows how much you agree or disagree.

11) I feel that I have to study harder than other students in my class:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

12) Sometimes I have difficulty understanding what my teachers are saying:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

13) I feel that my teachers encourage me to do well in my school work:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

14) I enjoy coming to school:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

15) I feel that my family encourages me to do well in my school work:

   a) strongly agree
   b) agree
   c) disagree
   d) strongly disagree

16) I am afraid to ask questions during class:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

17) I never forget to do my homework and bring it to school:

    a) strongly agree
    b) agree
    c) disagree
    d) strongly disagree

18) How often do you feel that you would rather be doing something else than being in school:

    a) all the time
    b) sometimes
    c) rarely
    d) never

19) How would you rate your study skills:

    a) excellent
    b) good
    c) fair
    d) poor

20) Circle the statement which best applies to you:

    a) I am very motivated about school and learning
    b) I am motivated about school and learning
    c) I am somewhat motivated about school and learning
    d) I am not motivated about school and learning

21) As a student:

    a) I have set educational goals for myself
    b) I plan to set educational goals for myself
    c) I do not have any educational goals for myself

22) Think about school this year. What was good and what was
    bad in your experience in school this year? Use this space
    to share some of your school experiences.

23) Name three things that you like most about school.

    1._____

    2._____

    3._____

24) Use the space below for any additional comments.

Parent Perception Inventory

Dear Parent:

We are interested in finding out your views about how your child is doing in school.   There are no right or wrong answers.

_____

School: _____

Child's Name: _____

Circle the one that applies to your child.

Current Grade: 6   7   8   9

Sex: Female   Male

Race/Ethnic Background: Black   Hispanic

. . . .

The following questions are about your child's participation in school.   Put a check mark beside the statement that best applies to your son or daughter.

1)   My son/daughter is:

a)   more interested in school than before
b)   shows the same amount of interest in school as before
c)   is less interested in school than before

2)   I see my child:

a)   studying harder at home than before
b)   studying just about the same as he/she did before
c)   studying less than before

3)   I feel my child is:

a)   more motivated about school now than before
b)   just as motivated about school as he/she was before
c)   less motivated about school than before

4) I believe that my child:

   a) is doing better in school now than before
   b) is doing just as well as he/she used to do before
   c) is doing poorer than he/she used to do before

5). I find that :

   a) I am very interested in how well my child is doing in
      school
   b) I am just as interested in how well he/she is doing as
      before
   c) I am less interested in how well he/she is doing

6) I find that :

   a) I know more about my child's progress than I did before
   b) I know just about as much as I knew before
   c) I know less about my child's progress than I knew before

7) How frequently are you made aware of how your child is doing
   (either through homework or by progress report from teachers)

   a) weekly
   b) every two weeks
   c) once a month
   d) once every two months

8) What are your educational plans for your child

   a) I don't have any
   b) I hope he/she gets some vocational training for example,
      learn a trade, go to secretarial school, etc.
   c) I hope he or she gets some college education
   d) I hope he or she earns a college degree

9) I have attended _____ parent meetings/conferences this
   year. (Specify)

Additional comments:

Parent's Signature _____