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ABSTRACT

The Southwest Alabama Cooperative Literacy Project was a workplace literacy program involving the University of South Alabama and seven manufacturing plants in the LeMoyne Industrial Complex in southwestern Alabama. The project's primary objective was to increase job productivity by teaching both conventional and functional literacy skills in reading and mathematics. During the project, 26 employees participated in 1 or more sessions of reading classes, and 35 employees took 1 or more sessions of math classes. Of the 39 participants who completed one or more sessions in reading, math, or both, 27 were black males, 2 were black females, and 10 were white males. All were between the ages of 35 and 60. The participants held diverse positions at their respective plants, such as:--welder, storeroom worker, pulp handler, operator, millwright, loader, and foreman. Fifteen of the 24 participants who completed the reading sessions and 21 of the 27 participants who completed the math sessions scored 80% or higher on their end-of-session competency tests. Follow-up evaluations of the participants' job productivity were slated for the coming months. Information about the project was disseminated through various conferences and publications. (Also included are the project's final performance report and nine tables summarizing the characteristics of participants in the various project classes.) (MN)

FINAL EVALUATION

TOOLS FOR THE 21ST CENTURY

Southwest Alabama
Cooperative Literacy Project

National Workplace Literacy Program
U. S. Department of Education

Submitted To:

Dr. Sylvia Spann, Project Director
University of South Alabama

Submitted By:

Judith D. Lipscomb, Evaluator
C. Hines Cronin, Evaluator

October 15, 1994

TOOLS FOR THE 21ST CENTURY

SUMMARY INFORMATION

Grant Award:	U. S. Department of Education Literacy Program Grant $274,000, 18 month 1993-1994
Grant Recipient:	University of South Alabama Department of Developmental Studies Mobile, Alabama Dr. Sylvia Spann, Director
Literacy Advisory Board Members:	John Green, Zeneca Steve Johnson, AKZO Rick Weldon, ELF-Atochem Chris Butler, Hoeschst-Celanese Ed Holmes, Barry Steam Plant Lisa Carlisle, Dupont Brenda McClure, Courtaulds
Private Sector Participants:	AKZO Courtaulds Zeneca

Class Enrollments:

Pilot	12 students
Fall	27 students
Winter	27 students
Spring	25 students
Summer	14 students
TOTAL:	105 students

Tools for the 21st Century was a cooperative effort by the University of South Alabama and seven manufacturing plants in the LaMoyne Industrial Complex, Mobile, Alabama. Dr. Sylvia Spann, Project Director, and Ms. Charlotte Matthews, Project Coordinator, and an advisory board with training officers from seven industries were committed to the project goals, screening, recruiting and furnishing job-related information. The Barry Steam Plant provided a training site, utilities and furniture in the industrial complex area where the plants were located. A commitment was evident to achieve a priority need for students to master basic literacy skills. With these skills participating employers felt confident employees would (1) cope with inevitable job changes associated with technology and total quality management practices, and (2) pass anticipated standardized tests to meet federal guidelines.

Management Plan

The University of South Alabama: The University of South Alabama, as the educational partner, provided (a) the project design and implementation, (b) the instruction, (c) the instructional materials, (d) lab and classroom facilities, (e) project management, (f) project evaluation, and (g) follow-up counseling and consultation.

The Project Director administered the project, directed planning and implementation, and coordinated all activities involving instruction, assessment, recruiting and evaluation. The Director met on a regular basis with the Literacy Advisory Board composed of training officers from each participating partner, the Employee Advisory Board, and the Project Training Coordinator.

The project training coordinator was responsible for selection and training of all instructors and tutors, supervised all learning lab activities and reviewed instructional materials. The project coordinator participated in regular meetings with the Project Director and others.

External evaluators conducted content evaluation, assessed job tasks, and performed formative and summative evaluation. The project evaluators determined if instructional goals were appropriate and that achievement was measurable.

The site coordinator for the LeMoyne Industrial Complex coordinated all project activities among the seven complex members. The site coordinator assisted in literacy audits, materials collection, recruiting and scheduling of classes. The LeMoyne coordinator also served as a member of the Literacy Advisory Board.

The Literacy Advisory Board, composed of training officers from each of the plants in the LeMoyne Industrial Complex served as consultants throughout the project.

Preparation for instruction and project implementation followed the proposed task completion schedule:

- Curriculum development with job-related emphasis in literacy instruction for reading and math.
- Pilot reading and math instruction.
- Fall, 1993, reading and math classes.
- Winter, 1993, reading and math classes.
- Spring, 1994, reading and math classes.
- Summer, 1994, reading and math classes.

Objectives: The focus of the project's objectives was to increase job productivity by teaching both conventional and functional literacy skills in reading and math.

- Workers show measurable gains in tests of basic math skills.
- Workers show measurable gains in tests of basic language skills.

Employees scoring below seventh grade on the ABLE established a student target group. A vigorous recruitment activity was enacted to recruit and instruct employees in the LaMoyne Industrial Complex.

Evaluation: To capture both the qualitative and quantitative dimensions of the Project, a holistic model was used which negotiates four major evaluation tasks. These tasks addressed integration of academic needs for reading and math and job tasks as described in job descriptions, employee demographic data, policy manuals and site observations and interviews.

- Determine the degree to which the curriculum design reflected workplace-specific literacy improvement needs.
- Determine the degree to which the proposed learning programs were designed to meet partnership specifications.
- Determine the degree to which the learning programs were effective in helping adult learners achieve the desired objectives.

- Determine the degree to which the achievement of lesson objectives were related to the attainment of enhancement of workplace skills and workplace outcomes.

Observations

Employers and Supervisors: What were the expectations of employers and supervisors with regard to work and non-related work outcomes and with regard to the conduct of the project?

Upon the completion of the pilot project, training officers on the Literacy Advisory Board were committed to the Project goals, screening, recruiting, furnishing job related information and cooperatively working with the Project Director and staff. One industry furnished a training site, utilities, furniture and a VCR. The commitment to success was evident. Three industries sent employees to participate in the classes.

The industries training officers emphasized a priority need for participants to master basic literacy skills. With these skills, they felt confident employees would (1) cope with inevitable job changes associated with technology and total quality management practices, and (2) pass anticipated standardized tests to meet federal guidelines.

The constraints of class scheduling, varied shift work schedules and volunteer participation created a serious recruitment problem. A VCR tape was prepared by the Project staff to encourage employee participation. The video tape was given each training officer and used in the plants as a recruiting tool.

When the math and reading classes were formed after the pilot, employees from three industries enrolled in the classes. Three companies provided released time, either full - or half-time. The limited participation was attributed to unexpected plant problems, management changes, down-sizing of the workforce and class schedules.

The upper management levels of industry partners delegated responsibilities of employee participation to training officers. The Project Director in collaboration with training officers communicated recruiting problems to plant managers and created more flexible class schedules responsive to varied work schedules.

Instructors: What were the instructors' understanding of their roles in the overall success of the project?

Instructors prioritized teaching academic basic skills in reading and math, particularly with regard to skills required for participants to successfully achieve reading and math standards, enhance job performance and productivity and escalate self esteem.

Instructors were clear about their responsibilities in assigned areas of teaching expertise. There was collaborative planning to individualized instruction plans for each student.

Students: Do students understand why they are enrolled in the course, what they want from the courses, and what they should be learning?

Students knew that their scores on the ABLE Selectable diagnostic test administered at their plants targeted them for participation. Whether they knew why they were targeted was not evident from the interviews. In regard to academic weaknesses, students listed fractions, spelling and vocabulary. Several expressed a need for increased skills in order to pass anticipated standardized tests.

Process Of The Project

Employers and Supervisors: What was the understanding of employers' and supervisors' roles in the success of the project? Was there a willingness to provide release time or incentives to participants, and what were the expectations with regard to conduct of the class?

Zeneca and AKZO required students' attendance and provided release time. Courtaulds gave incentives for volunteers to participate. Barry Steam Plant furnished the instructional facility.

Training officers and Project staff understood the recruitment and enrollment problems, and accepted the challenge of finding solutions applicable to each industry partner.

Instructors: What were instructors' perspectives on the training they received, materials they used, curriculum developed, record-keeping, and their in-put into the learning process?

All instructors received three days of training. The manual used for this training was compiled by Charlotte Matthews, Training Coordinator. Training included an overview of adult education and philosophy, information about designing and implementing state-of-the-art workplace literacy programs, the project proposal, samples of a literacy audit, and results from industry interviews. From a number of individuals who received the training, the following were hired to work in the program -- Kim Boyles, Bob Houston, Diane Garden, Janice Brown, Sylvia Spann in Reading and Larry Brown Jacqueline Wade, Michael Hockey and Charlotte Matthews in Math. Michael Hockey was hired as computer lab coordinator.

Instructors employed in the program expressed satisfaction with their experience, training, and expertise in assigned subject areas. They were able to conduct the classes and expressed general satisfaction with the materials they used. Each

instructor wrote content-specific lesson plans in either math or reading. Lesson plans for each computer lab session were given to the lab coordinator who supervised the lab hour and then forwarded print-outs of results to instructors. Instructors and the lab supervisor conferred about the lab assignments. From an inventory of programs for reading, math and workplace related topics, students experienced a broad scope of technology-driven learning experiences.

Individual folders of each student's work were kept for each math and reading class. The folders contained diagnostic test results, forms indicating which objectives were mastered, and the post-tests. The folders also contained information on the student's job, educational course of study, student-generated work, samples of work-related lessons and teacher comments.

Instructors were enthusiastic about the project and seemed to take genuine interest in the students.

Students: How did students react to schedules, materials, conduct of class, and facilities?

Students were enthusiastic about the program. No scheduling difficulties were mentioned. They seemed to appreciate the facility and the computer lab. Instructors mentioned that they suspected many of the participants preferred being in class to being at work.

There was absolute acceptance of teacher-assigned materials by students. They expressed enjoyment of the class time spent in collaboration with other students. Pleasing the teacher and following directions were seen as personal accomplishments.

When asked about improved skills at work or home, they expressed more awareness of higher self esteem than concrete benefits at work or home.

The students stressed their appreciation for the instructors who worked with them, and the students were very enthusiastic about the classes and their own progress.

Outcomes of the Project

Employers and Supervisors: How did employers and supervisors know when goals of the project had been met?

The Project Director forwarded to each student's training officer results of the mastery tests on objectives in either math or reading, interpreted these test scores and made recommendations for the next course session. Each training officer then decided whether or not to reassign a worker to classes. The supervisors maintained a commitment to the Project's stated goal of "enhanced job performance and productivity".

Instructors: How did instructors recognize when the goals and objectives of the Project were met? What do current data show?

Each instructor designed and administered a mastery tests for the academic objectives covered in the assigned areas of instruction. In some cases a standardized or text-book test was given. The mastery scores were used in determining if students should continue classes in the succeeding session. The low beginning level for many students made 80% mastery unrealistic.

Students: How did the students recognize progress and goal attainment? Was there a realization of applications of new knowledge at work? How did the students rate the program?

Students expressed pleasure in seeing their progress in successfully completed lessons and in teacher praise. They were willing to "do again" when they were not pleased with their progress.

Students' comments included, "I learned fractions and it helps me do my job", and "I can read the Bible and pronounce the names".

A comparison of means on pre- and post-test results for 29 students who took both pre and post-tests revealed an average gain of 4.2 points on Form C of the SelectABLE The published standard deviation is 10.4. So the gain is approximately one-half a standard deviation. The average mean for the pre-test was 24.9; the average for the post-test was 29.1. The published average mean was 30.6. Therefore, the group mean was raised almost to the published mean, roughly equivalent to 8th grade level.

Of six student scoring level I (Gr. 1-4) on pre-test, five scored Level II (Gr. 5-8) on post-test. Of 23 students scoring level II on pre-test, 13 scored level III (Gr. 9-12) on post-test (see enclosed scope and sequence chart).

Instructor-assigned grades reflected student's performance in traditional grades using a 100 point scale. Final grades were assigned for 79 students. For 14 students, final grades were not assigned because they did not attend enough classes to be evaluated. There were a total of 48 students who were enrolled in one or more classes for a total of 105 participants.

FINAL GRADES: PILOT PROGRAM

GRADES	READING	MATH
80 - 100%	2	4
70 - 79%	3	3
60% (Less)	6	4
No Grade	1	1
*TOTALS:	12	12

*The 12 participants in the pilot program were enrolled in both reading and math.

FINAL GRADES BY CYCLE

GRADES	FALL	WINTER	SPRING	SUMMER	TOTAL
80 - 100%	12	14	9	7	42
70 - 79%	5	4	4	4	17
69% or Less	5	5	8	2	20
Non-Completers	5	4	4	1	14
TOTALS:	27	27	25	14	93

FINAL GRADES BY CYCLE (Completers Only)

GRADES	FALL	WINTER	SPRING	SUMMER	TOTAL
80 - 100%	12 (55%)	14 (61%)	9 (43%)	7 (54%)	42 *(53%)
70 - 79%	5	4	4	4	17
69% or Less	5	5	8	2	20
TOTALS:	22	23	21	13	79

*Percent of participants completing each cycle who reached the stated goal of 80% mastery on the skills in reading or math.

CONCLUSIONS BASED ON PROJECT EVALUATION

After careful review and analysis of the data and the interviews with employers, instructors, students and the Project Director, some conclusions are evident. Summary data are attached for all four quarters of reading and math instruction.

Purpose

The industry training officers, participants and Project staff believed that basic literacy skills were needed by workers. With varying degrees of knowledge, they agreed that basic skills of math and reading must be mastered before one can move on to higher-order processing of information. Mastery of skills in a continuum was the curriculum design agreed upon in the hope that it will move a student toward the overall goals of literacy and enhanced job performance and productivity.

Three participating companies were faithful to their commitment to provide students. However, the number of students actually enrolled is lower than the 60 students per quarter anticipated at the time the proposal was submitted.

There was no evidence to support job performance and productivity were achieved. Training officers and supervisors

maintained a strong commitment to literacy training and supported continuation of classes after the Project was terminated.

Process

The program of studies was developed using standard texts and adding work-related problems to infuse work relevance into lessons. Literacy audits were performed to determine student work assignments, team responsibilities and specific academic requirements to perform tasks. The curriculum was generalized in an attempt to achieve relevancy for all participants.

Computers were used to provide drill and practice, and the lab assignments were relevant to class study or to work-related needs.

Students viewed instructors as "teachers" rather than as facilitators in the learning process. They were not partners in the determination of their course of study.

Outcomes

A good working partnership was established between the Project Director and industry partners who agreed to participate.

The educational facility was pleasant, convenient to the workers, and a positive environment for learning.

Instructors capable of teaching skills of reading and math were hired and trained.

Anecdotal data indicate that the participants enjoyed the classes and appreciated the efforts being made on their behalf. The goal of improved self-esteem on the part of the workers was met.

There were no baseline data on job productivity, current worker pay status, supervisor's evaluations, or students' own views of individual capabilities as a team member.

General Conclusions

The Project staff, training officers, supervisors and students maintained a strong belief in the relatedness of literate employees and job performance. They clearly defined reading and math as the basic academic skills needed in the work environment.

Most students were experienced employees who enjoyed job satisfaction and felt no threat of termination because of literacy

deficiencies. They were capable of coping with academic-related problems through team processes and tutorial processes. Those who had difficulty reading asked co-workers to explain written materials. Others learned through tutoring math skills specific to their jobs, but had difficulty transferring or expanding their skills to solve new problems.

Literacy education to achieve mastery levels at grades 8 or 9 in reading and math required long-term released time. Students, with few exceptions, were not willing to voluntarily perform additional academic tasks beyond scheduled work time. This was further supported by low to no participation in the program from plants when released time was not given by management.

The integration of work tasks and academic mastery to achieve literacy was difficult. An effective literacy audit required an extensive time requirement to analyze and understand the employees' written job descriptions and real or perceived work tasks. The problem was compounded by students' inability to formulate relationships among academic expectations and job responsibilities -- they lacked higher order thinking skills. The burden of establishing integrated learning was placed on the instructor and curriculum designer to make reading and math relevant to the employees' specific work tasks.

Work schedules in different industrial plants created a difficult class scheduling problem. Having a training site in the industrial complex was extremely beneficial. Participation was constrained by various shift-work schedules and number of employees that managers would allow to attend classes on released time. Scheduling for individual plants was an obvious need -- creating schedules appropriate for multiple plants was a major problem.

The Project staff, training officers and students believed the Project was successful. Without exception, all recommended continuation of classes and efforts to integrate academic and work-related skills. They were committed to focusing on reading and math as the most work-related skills needed for employees.

SOUTHWEST ALABAMA COOPERATIVE LITERACY PROJECT
Final Performance Report

1. **Compare actual accomplishments to the objective contained in the approved application.**

The project's objective was to increase job productivity by teaching both conventional and functional literacy skills in reading and math. The learning goals were to make measurable gains in tests of basic math and basic language skills. Proficiency was set at 80% correctness on periodic and final tests.

Twenty-six employees participated in reading classes one or more sessions. Of the twenty-four who completed sessions, fifteen scored 80%, or above, on their competency exams.

Thirty-five employees took math classes one or more sessions. Of the twenty-seven persons who completed sessions, twenty-one scored 80% or above on their competency tests.

Of the twenty-nine employees participating in the project who completed both the SelectABLE pre and post tests, twenty-four showed gains in scores ranging from 1-18 points. For a detailed record of performance for each participant, refer to the summary sheets attached to the final external evaluation report. Increased job productivity has not been measured scientifically, but anecdotal information obtained from team supervisors and training managers from the participating plants indicate a positive change.

Follow-up evaluations of job productivity is scheduled during the coming months.

2. **Refer to the schedule of accomplishments and their target dates contained in the approved application and give reasons for slippage in those cases where established objectives were not met. Include any corrective measures taken to correct slippage.**

All target dates were met according to the project timeline with the exception of selection of other chemical plants for replication.

We spoke to representatives of other chemical plants in the area and gave them information about replicating the workplace program. However, none of the plants we contacted have elected to implement a similar project at this time.

3. **Identify the number and characteristics of project participants who completed planned project activities and of those who did not, and the outcomes achieved by participants who completed project activities.**

Forty-eight employees registered for classes during the project's activities. Fourty-four of those registering had been administered the SelectABLE in order to identify grade level placement. Ten scored at Level One (grades 1-4); thirty-four scored at Level Two (grades 5-8).

Thirty-nine participants completed one or more sessions in reading, math or both. Of this group, twenty-seven were black males, two were black females and ten were white males. The age range of this group was 35-60. Job titles were welder, storeroom, pulp handler, soda man, operator, spinner, painter, maintenance, production, millwright, loader, foreman. Highest grade in school completed ranged from 7th-12th grade. Twenty-seven completed 12th grade, seven completed 11th grade, four completed 10th grade, one completed 8th grade and one completed 7th grade (see attached list of job titles and grades completed - includes one non-completed).

Fifteen participants obtained 80% competency in reading and twenty-one participants obtained 80% proficiency in math.

Seven participants registered but failed to complete any session. This group was composed of four black males, two white males and one black female. Their ages ranged from 37-49. Data is not available on job titles and grades completed for this group.

4. **Report on any dissemination activities.**

Sylvia Spann, project director; Charlotte Matthews, training coordinator; and John Green, site coordinator participated in various dissemination activities. A detailed listing follows.

Spann, **"Workplace Writing,"** NCTE Interregional Conference, March 4, 1995, New Orleans.

Matthews, **"Developing Math Curriculum for the Workplace,"** Texas Community and Technical College Workforce Education Consortium, Dallas, Texas, May, 1994.

Matthews, **"Developing Math Curriculum for the Workplace,"** National Association for Developmental Education, Kansas City, March, 1994.

Green and Spann, **"Your Company Can Establish Workplace Literacy Classes,"** Mobile Area Trainers and Educators Meeting, Mobile, AL, November 10, 1993.

Green and Spann, Literacy Workplace Seminar panelists, **"Building a Better Workforce,"** Mobile, AL, Oct. 28, 1993.

Spann, **"USA Teaches 'Workplace Literacy' to Area Industries,"** USA Midsummer Memo, August 19, 1993.

Matthews and Spann, **"The Cooperative Southwest Alabama Literacy Project,"** Alabama NWPL Conference, Montgomery, AL, August 3, 1993.

Green, **"Tools for the Twenty-first Century,"** The Spotlight (Newsletter of Zeneca, Inc.) Vol. 9, 2nd issue, Summer 1993.

Spann, "USA Joins Effort in Workplace Literacy," Happenings in Higher Education, July/August, 1993.

Spann, "Workplace Literacy Grant Awarded to USA," USA Midweek Memo, May 20, 1993.

5. **Report on any evaluation activities.**

External evaluators evaluated the pilot program at the end of summer, 1993 and at the project's end in November, 1994.

Participants in each of the five instructional sessions completed evaluations of the courses and the instructors.

Ongoing evaluation of the project occurred throughout the projects in meetings with the Literacy Advisory Committee and the Employee Advisory Boards.

6. **Report on any changes in Key personnel.**

There were no changes in Key personnel.

Job Title	Grade Level	Count
Welder	12	1
Storeroom	12	1
Welder/Pipe Fitter	10	1
Pulp Handler	12	1
Soda Man	12	1
Spinner	12	1
Operator	11	1
Operator	12	1
Operator	12	1
Painter	12	1
Operator	12	1
Production	12	1
Maintenance	12	1
Maintenance	10	1
Maintenance	11	1
Maintenance	11	1
Millwright	11	1
Maintenance	8	1
Millwright	12	1
Operator	10	1
Operator	12	1
Operator	12	1
C/P	12	1
C/P	11 GED	1
CAVE Operator	12	1
Bale Press Operator	12	1
A Operator	12	1
C/P	12	1
1st Class Operator	12	1
Loader	11	1
Loader	10	1
Maintenance	12	1
Forklift Operator	12	1
Churn Room Operato	11	1
Foreman	12	1
Maintenance	12	1
Maintenance	12	1
Maintenance	12	1
Maintenance	7	1
Maintenance	12	1
		40

PLANT	SEL PR	SEL PO	Chng	Ct	SEX	AGE	RACE	PILOT
Akzo	31	34	3	1	M		White	R80 M86
Akzo	31	32	1	1	M		Black	R70 M69
Zeneca	11	29	18	1	M	51	Black	R63 M72
Zeneca	23		-23	1	F		Black	NG
Zeneca	26	31	5	1	M	39	Black	R68 M34
Zeneca	28	32	4	1	M	51	Black	R75 M77
Zeneca	18	30	12	1	M	56	Black	R55 M90
Zeneca	15		-15	1	M	59	Black	R93 M74
Zeneca	17	16	-1	1	M		Black	R38 M45
Zeneca	19	23	4	1	M	39	White	R65 M80
Zeneca	15	31	16	1	M	49	White	R73 M80
				11				

Change column is meaningless for students not administered t

PLANT	SEL PR	SEX	SEL PO	Chng	Ct	AGE	RACE	PILOT	FA CL	FA GR
Akzo	28	M	33	5	1	43	White		Reading	78
Akzo	30	M	33	3	1	44	Black		Math	92
Akzo	22	M	24	2	1	41	White		Math	89
Akzo	36	M		-36	1	49	Black		Reading	NG
Akzo	22	M	12	-10	1	48	Black		Reading	43
Akzo	30	M	35	5	1	42	White		Reading	95
Akzo	25	M	26	1	1	51	Black		Reading	70
Akzo	24	M	17	-7	1	43	Black		Math	71
Akzo	27	M	35	8	1	35	White		Math	94
Akzo	26	M	34	8	1	45	Black		Reading	100
Akzo	24	M		-24	1	59	Black		Reading	59
Akzo	27	M		-27	1	37	Black		Math	NG
Courtaulds	22	M		-22	1	61	Black		Reading	93
Courtaulds	18	M		-18	1	37	Black		Math	NG
Courtaulds	28	M		-28	1	40	Black		Math	98
Courtaulds	17	M		-17	1	45	Black		Reading	80
H. Celanese		M		0	1	38	White		Math	NG
Zeneca	11	M	29	18	1	51	Black	R63 M72	Reading	54
Zeneca	26	M	31	5	1	39	Black	R68 M34	Math	69
Zeneca	28	M	32	4	1	51	Black	R75 M77	Reading	NG
Zeneca	7	M	22	15	1	54	Black		Reading	73
Zeneca	18	M	30	12	1	56	Black	R55 M90	Reading	85
Zeneca	15	M		-15	1	59	Black	R93 M74	Reading	80
Zeneca	28	M	31	3	1	62	Black		Math	58
Zeneca	19	M	23	4	1	39	White	R65 M80	Math	83
Zeneca	25	M	31	6	1	43	Black		Math	80
Zeneca	15	M	31	16	1	49	White	R73 M80	Math	71
					27					

Change column is meaningless for students not administerd both a pre- and post-Selectable.

PLANT	SEL PR	SEL PO	Chng	Ct	SEX	AGE	RACE	PILOT	WI CL	WI GR
Akzo	29	36	7	1	M	60	Black		Reading	100
Akzo	30	23	-7	1	M	57	Black		Math	99
Akzo	28	33	5	1	M	43	White		Math	80
Akzo	30	33	3	1	M	44	Black		Math	63
Akzo	30	28	-2	1	F	45	Black		Math	98
Akzo	29	33	4	1	M	39	White		Math	80
Akzo	22	24	2	1	M	41	White		Math	86
Akzo	28		-28	1	M	47	White		Math	NG
Akzo	29	37	8	1	M	55	White		Math	86
Akzo	36		-36	1	M	49	Black		Math	NG
Akzo	22	12	-10	1	M	48	Black		Math	76
Akzo	25	26	1	1	M	51	Black		Reading	82
Akzo	24	17	-7	1	M	43	Black		Math	81
Akzo	27	35	8	1	M	35	White		Math	91
Akzo	26	34	8	1	M	45	Black		Math	NG
Akzo	24		-24	1	M	59	Black		Math	79
Courtaulds	28		-28	1	M	50	Black		Reading	100
Zeneca	11	29	18	1	M	51	Black	R63 M72	Reading	83
Zeneca	26	31	5	1	M	39	Black	R68 M34	Math	74
Zeneca	28	32	4	1	M	51	Black	R75 M77	Reading	95
Zeneca	7	22	15	1	M	54	Black		Reading	49
Zeneca	18	30	12	1	M	56	Black	R55 M90	Math	39
Zeneca	15		-15	1	M	59	Black	R93 M74	Reading	NG
Zeneca	28	31	3	1	M	62	Black		Math	48
Zeneca	19	23	4	1	M	39	White	R65 M80	Math	92
Zeneca	25	31	6	1	M	43	Black		Math	52
Zeneca	15	31	16	1	M	49	White	R73 M80	Reading	79
				27						

Difference column is meaningless for students not administerd both a pre- and post-Selectable

PLANT	SEL PR	SEL PO	Chng	Ct	SEX	AGE	RACE	PILOT	SPR CL	SP GR
Akzo	29	36	7	1	M	60	Black		Math	88
Akzo	28	33	5	1	M	43	White		Math	84
Akzo	30	28	-2	1	F	45	Black		Math	57
Akzo	29	37	8	1	M	55	White		Math	91
Akzo	22	12	-10	1	M	48	Black		Math	49
Akzo	25	26	1	1	M	51	Black		Math	83
Akzo	27	35	8	1	M	35	White		Math	91
Courtaulds	32		-32	1	M	43	Black		Reading	NG
Courtaulds	18		-18	1	M	37	Black		Reading	NG
Courtaulds	25		-25	1	M	34	White		Reading	96
Courtaulds	22		-22	1	M	34	Black		Reading	97
Zeneca	11	29	18	1	M	51	Black	R63 M72	Math	70
Zeneca	28	29	1	1	M	57	Black		Math	56
Zeneca	27	35	8	1	F	41	Black		Math	68
Zeneca	26	31	5	1	M	39	Black	R68 M34	Math	49
Zeneca	28	32	4	1	M	51	Black	R75 M77	Math	78
Zeneca	7	22	15	1	M	54	Black		Reading	NG
Zeneca	18	30	12	1	M	56	Black	R55 M90	Math	51
Zeneca	15		-15	1	M	59	Black	R93 M74	Math	NG
Zeneca	28	31	3	1	M	62	Black		Math	36
Zeneca	17	16	-1	1	M		Black	R38 M45	Reading	70
Zeneca	30	32	2	1	M	43	Black		Math	80
Zeneca	19	23	4	1	M	39	White	R65 M80	Math	93
Zeneca	25	31	6	1	M	43	Black		Math	78
Zeneca	15	31	16	1	M	49	White	R73 M80	Math	68
				25						

Change column is meaningless for students not administered both a pre- and post-Selectable.

PLANT	SEL PR	SEL PO	Chng	Ct	SEX	AGE	RACE	PILOT	SU CL	SU GR
Courtaulds		22	22	1	M		Black		Reading	91
Courtaulds	22		-22	1	M	34	Black		Math	inc
Zeneca	11	29	18	1	M	51	Black	R63 M72	Math	87
Zeneca	28	29	1	1	M	57	Black		Math	87
Zeneca	27	35	8	1	F	41	Black		Math	77
Zeneca	26	31	5	1	M	39	Black	R68 M34	Math	30
Zeneca	28	32	4	1	M	51	Black	R75 M77	Math	94
Zeneca	7	22	15	1	M	54	Black		Reading	87
Zeneca	18	30	12	1	M	56	Black	R55 M30	Math	71
Zeneca	28	31	3	1	M	62	Black		Math	32
Zeneca	17	16	-1	1	M		Black	R38 M45	Reading	78
Zeneca	30	32	2	1	M	43	Black		Math	94
Zeneca	25	31	6	1	M	43	Black		Math	74
Zeneca	15	31	16	1	M	49	White	R73 M80	Math	83
				14						

Change column is meaningless for students not administered both a pre- and post-Selectable

PLANT	SEX	RACE	AGE	SEL PR	SEL PO	Chng	Cl	PILOT	FA CL	FA GR	WI CL	WI GR	SPR C	SP GI	SU C	SU G
Akzo	M	Black	60	29	36	7	1				Reading	100	Math	88		
Akzo	M	Black	57	30	23	-7	1				Math	99				
Akzo	M	White	43	28	33	5	1		Reading	78	Math	80	Math	84		
Akzo	M	Black	44	30	33	3	1		Math	92	Math	63				
Akzo	F	Black	45	30	28	-2	1				Math	98	Math	57		
Akzo	M	White		31	34	3	1	R80 M86								
Akzo	M	White	39	29	33	4	1				Math	80				
Akzo	M	White	41	22	24	2	1		Math	89	Math	86				
Akzo	M	White	47	28		-28	1				Math	NG				
Akzo	M	White	55	29	37	8	1				Math	86	Math	91		
Akzo	M	Black	49	36		-36	1		Reading	NG	Math	NG				
Akzo	M	Black	48	22	12	-10	1		Reading	43	Math	76	Math	49		
Akzo	M	White	42	30	35	5	1		Reading	95						
Akzo	M	Black	51	25	26	1	1		Reading	70	Reading	82	Math	83		
Akzo	M	Black	43	24	17	-7	1		Math	71	Math	81				
Akzo	M	White	35	27	35	8	1		Math	94	Math	91	Math	91		
Akzo	M	Black	45	26	34	8	1		Reading	100	Math	NG				
Akzo	M	Black	59	24		-24	1		Reading	59	Math	79				
Akzo	M	Black		31	32	1	1	R70 M69								
Akzo	M	Black	37	27		-27	1		Math	NG						
Courtaulds	M	Black			22	22	1								Read	91
Courtaulds	M	Black	43	32		-32	1						Reading	NG		
Courtaulds	M	Black	61	22		-22	1		Reading	93						
Courtaulds	M	Black	37	18		-18	1		Math	NG			Reading	NG		
Courtaulds	M	White	34	25		-25	1						Reading	96		
Courtaulds	M	Black	50	28		-28	1				Reading	100				
Courtaulds	M	Black				0	1									
Courtaulds	M	Black	40	28		-28	1		Math	98						
Courtaulds	M	Black	45	17		-17	1		Reading	80						
Courtaulds	M	Black	34	22		-22	1						Reading	97	Math	inc
H. Celanese	M	White				0	1									
H. Celanese	M	White	38			0	1		Math	NG						

Change column is meaningless for students not administered both a pre- and post- Selectable.

PLANT	SEX	RACE	AGE	SEL PR	SEL PO	Chng	Ct	PILOT	FA CL	FA GR	WI CL	WI GR	SPR C	SP GI	SU C	SU GI
Zeneca	M	Black	51	11	29	18	1	R63 M72	Reading	54	Reading	83	Math	70	Math	87
Zeneca	M	Black	57	28	29	1	1						Math	56	Math	87
Zeneca	F	Black	41	27	35	8	1						Math	68	Math	77
Zeneca	F	Black		23		-23	1	NG								
Zeneca	M	Black	39	26	31	5	1	R68 M34	Math	69	Math	74	Math	49	Math	30
Zeneca	M	Black	51	28	32	4	1	R75 M77	Reading	NG	Reading	95	Math	78	Math	94
Zeneca	M	Black	54	7	22	15	1		Reading	73	Reading	49	Reading	NG	Read	87
Zeneca	M	Black	56	18	30	12	1	R55 M90	Reading	85	Math	39	Math	51	Math	71
Zeneca	M	Black	59	15		-15	1	R93 M74	Reading	80	Reading	NG	Math	NG		
Zeneca	M	Black	62	28	31	3	1		Math	58	Math	48	Math	36	Math	32
Zeneca	M	Black		17	16	-1	1	R38 M45					Reading	70	Read	78
Zeneca	M	Black	43	30	32	2	1						Math	80	Math	94
Zeneca	M	White	39	19	23	4	1	R65 M80	Math	83	Math	92	Math	93		
Zeneca	M	White		7		-7	1									
Zeneca	M	Black	43	25	31	6	1		Math	80	Math	52	Math	78	Math	74
Zeneca	M	White	49	15	31	16	1	R73 M80	Math	71	Reading	79	Math	68	Math	83
							#									

Change column is meaningless for students not administered both a pre- and post- Selectable.

PLANT	SEX	RACE	AGE	SEL PR	SEL PO	Chng	Ct
Akzo	M	Black	60	29	36	7	1
Akzo	M	Black	57	30	23	-7	1
Akzo	M	White	43	28	33	5	1
Akzo	M	Black	44	30	33	3	1
Akzo	F	Black	45	30	28	-2	1
Akzo	M	White		31	34	3	1
Akzo	M	White	39	29	33	4	1
Akzo	M	White	41	22	24	2	1
Akzo	M	White	55	29	37	8	1
Akzo	M	Black	48	22	12	-10	1
Akzo	M	White	42	30	35	5	1
Akzo	M	Black	51	25	26	1	1
Akzo	M	Black	43	24	17	-7	1
Akzo	M	White	35	27	35	8	1
Akzo	M	Black	45	26	34	8	1
Akzo	M	Black		31	32	1	1
Zeneca	M	Black	51	11	29	18	1
Zeneca	M	Black	57	28	29	1	1
Zeneca	F	Black	41	27	35	8	1
Zeneca	M	Black	39	26	31	5	1
Zeneca	M	Black	51	28	32	4	1
Zeneca	M	Black	54	7	22	15	1
Zeneca	M	Black	56	18	30	12	1
Zeneca	M	Black	62	28	31	3	1
Zeneca	M	Black		17	16	-1	1
Zeneca	M	Black	43	30	32	2	1
Zeneca	M	White	39	19	23	4	1
Zeneca	M	Black	43	25	31	6	1
Zeneca	M	White	49	15	31	16	1
						122	29

Only includes those who took both pre- and post- tests