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                Questionnaires; Retraining; School Business
                Relationship
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ABSTRACT
                In a pilot project, Vance-Granville Community College
in North Carolina and a local roofing manufacturer jointly developed
the SKILL (Skills and Knowledge in Lifelong Learning) training
program. The 63 employees enrolled in the voluntary program thus far
have received weekly instruction in functional, learning, and
computer skills, as well as technical training in job-specific skill
areas. Manuals focusing on literacy requirements have been developed
for each job and used as a basis for developing curricula for the
various program courses. According to interviews conducted with 5-10
participants every 6 weeks, most participants feel that the program
has been beneficial to them and demonstrates the company's personal
interest in its employees. Plant management is currently working to
help more employees see the link between the basic skills training
being offered and their jobs, and SKILL staff members are working to
include more functional contextual curriculum materials in the
program. (This report includes job task analyses, program promotion
materials, a program evaluation report detailing participant gains
during the first year, and the program evaluation instrument.)
(MN)
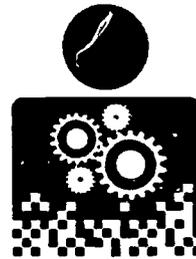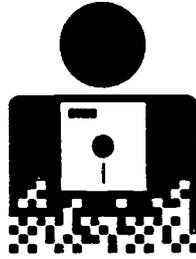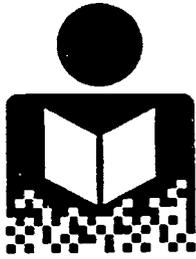
SKILLS AND KNOWLEDGE IN LIFELONG LEARNING

sponsored by

Vance-Granville Community College

and

CertainTeed Corporation

Oxford, North Carolina

.

Special Project Report to NC Department of Community
Colleges

by Jennifer Coplin
Coordinator of Workplace Literacy

Project Year 1991-1992

S.K.I.L.L.

S K I L L S &
K N O W L E D G E
I N L I F E L O N G
L E A R N I N G

CertainTeed ▣

2

BEST COPY AVAILABLE

SKILLS AND KNOWLEDGE IN LIFELONG LEARNING

Origins of the Program

Current census data available identified from 33% to 36% of adults in Vance-Granville Community College's four-county service area as "functionally illiterate." The college serves a small portion of these adults eligible for Adult Basic Education through its programs on the main campus and three satellite campuses and through a sprinkling of community-based programs in such places as public schools, churches, and community centers.

Industry leaders have expressed the need to the college for literacy programs for their employees. Changing technology means that many of the menial jobs are being automated, and companies need workforces who can use today's technology to acheive the best possible quality, speed, and efficiency on the shop floor. Reading technical manuals, calibrating delicate instruments, figuring means, measuring, reporting in oral and written formats, keying information into computers, understanding computer readouts, and communicating as part of a group are some of the specific functions industry leaders say they need of their employees, yet workers are not often able to carry out these tasks because of low reading, math, problem solving, and communication skills. The worksite seems an ideal medium for the college's literacy program to reach more of its eligible population.

CertainTeed Corporation, a roofing manufacturer in Oxford, NC, employing 200 workers, came to the college to seek help in solving their basic education problems. The company was willing to invest a sizeable amount of money into a pilot project drawn up by a literacy specialist from the U.S. Department of Labor. Their contribution would include the building of a learning lab and furnishing it with state-of-the-art computers and CD Rom hardware and software designed to individualize basic skills instruction. Furthermore, they would offer incentives to employees to attend the lab by linking promotion opportunities and by paying attendees one hour of regular pay for every two hours of their own time they spent in the lab. They would also employ a literacy consultant for the duration of the pilot to integrate and evaluate the program. From the college, the company sought instructional and technical assistance in setting up and implementing their program. They sought instructional materials development assistance in adding functional contextual materials (curriculum based on specific job tasks) and other supplemental literacy materials.

The program was to be part of the company's total training effort, entitled S.K.I.L.L., or Skills and Knowledge in Lifelong Learning. Another component of S.K.I.L.L. would be functional skills training, such as learning to learn, computer skills, and teamwork. The third component would be technical training or specific job skills. Each employee was to be retrained for his or her job and cross-trained for jobs within his or her family of jobs.

3

Vance-Granville Community College wrote to the NC Department of Community Colleges, asking for grants to cover instruction and curriculum development for the pilot period. The money was granted, and in September, 1991, instruction began in basic skills at the CertainTeed S.K.I.L.L. Center.

Assessing the Need

An indepth analysis of literacy tasks required of each of the 17 jobs in the plant was conducted and thoroughly documented. In addition, over 90% of workers volunteered to take the TABE in order to assess their own grade level equivalents in academic skills. The results of the individual scores were kept confidential between college staff and workers. A thorough search was then conducted of learning systems, curricula, and instructional methodology. The advice and guidance of the country's leading workplace literacy experts was sought in carrying out these activities.

It was found that more than half (61%) of hourly workers assessed were not able to read at the 9th grade level while full performance in their jobs required reading materials averaging a 10.8 grade level of reading difficulty.

The math requirements of production workers are also increasing due to the introduction of computer integrated tasks and statistical process control. Overall hourly workers scored only 7.8 in math.

Program Implementation

The CEO of CertainTeed, Michael Besson, approved the project based on the needs analysis. A steering committee was formed made up of two workplace literacy consultants with national experience, college literacy staff, training professionals with the company, the plant manager and group vice president, and several production workers. They determined policies for the program, defined participation for purposes of eligibility for promotion, and worked to market the program to workers. The advisory committee meets monthly to revise, refine, and determine ways to market the program to workers.

Staffing includes the retention of a workplace literacy consultant, the marketing and administrative services of the plant's training director, and two part-time instructors from the college, as well as the services of the college's workplace literacy coordinator who administers instructional services and curriculum development.

In cooperation with the Focused Industry Training program, manuals are being developed for each job which focus on literacy requirements. These manuals are used to develop curriculum, such as that used in a recent fractions class.

Most basic skills instruction is conducted on the computer system, matching students' current skill levels with job requirements.

All employees participated in 1 1/2 hours of orientation to the S.K.I.L.L.S. program, visiting the center in groups of 8-12. To date, 63 employees are enrolled in the program, and are attending an average of 1 hour, 40 minutes each week. Attendance is voluntary, although nonparticipants are restricted from bidding for promotions. Many other incentives are offered, such as wages, steak dinners, caps, jackets, pens, certificates and placques for various levels of accomplishment. No student has yet completed all requirements of the program which include retraining and cross-training on the job, since this component was only introduced in the spring of 1992. Some participants, however, have either tested out or completed basic skills requirements.

Company officials are unsure of the total number of employees who do not possess high school diplomas or the equivalent. However, S.K.I.L.L. staff members have recently launched a drive to recruit for GED classes and have had 7 people sign up.

Evaluation of the Program

The program is being evaluated based on its objectives. They are as follows: 1) Ensure that all employees possess predefined levels of basic literacy skills; 2) Provide a xost effective means by which employees can acquire higher level functional and technical skills; 3) Improve employee performance by upgrading skills.

Grade level gains as of April, 1992, and a complete description of evaluation plans are attached.

As coordinator of workplace literacy and as a designated internal evaluator for the program, this author has interviewed participants and nonparticipants who are plant workers to find out strengths and weaknesses of the program as well as attitudes towards the program. Interviews are conducted of between 5-10 workers every six weeks. Plant management has been able to use the results of these interviews to answer common questions at crew meetings, to schedule classes and lab hours, to market the program, to correct misinformation, and to evaluate policies governing the program.

Overall, workers feel the establishment of the S.K.I.L.L. program is very positive and shows a personal interest in employees by the company. Some, however, do not see the relationship between basic skills and their jobs. Management is working to help them see the link, and the S.K.I.L.L. staff is working to include more functional contextual curriculum materials in the program. The fact that the program is voluntary has proved frustrating in some ways since those who need basic

skills the most are also the most hesitant to come to the lab.
If the company had the developmental stage to do over, they would
probably make participation mandatory. They are not willing to
go back on their word, though, and make it mandatory at this
stage of the pilot project.

6

PROGRAM AND CURRICULUM DEVELOPMENT

JOB TASK ANALYSIS
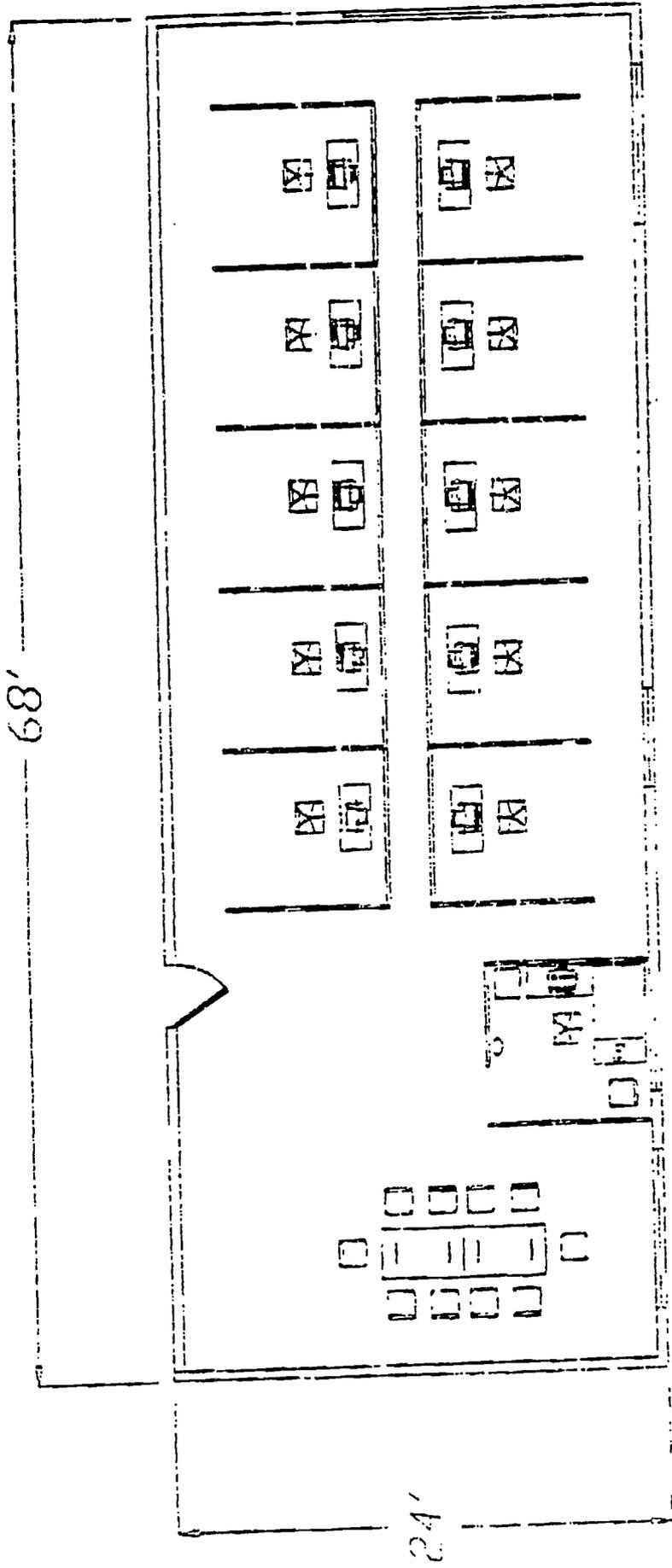
68'

24'

SKILL STATION LAYOUT

9

8

OVERVIEW OF S.K.I.L.L. TRAINING PROGRAM

TRAINING LEVEL	BASIC SKILLS	FUNCTIONAL SKILLS	TECHNICAL SKILLS
REQUIRED OF ALL LEVELS	Orientation (IMSATT)	Safety and Health (Drake) Substance Abuse (TRO)	None
LEVEL I	Learning Styles (Invest) Learning Strategies (Invest) ABE Reading 1 (Invest) ABE Math (Invest - 6.0) Basic Writing (Invest) Learning to Learn (Classroom)	Listening Skills (Invest) Computer Literacy (Invest, Keyboarding) Employability Skills (Invest)	None
LEVEL II	ABE Reading II (Invest) ABE Math (Invest - 8.0) ABE Writing (Invest - Part 1) Learning to Learn (Classroom)	Listening Skills (Invest) Critical Thinking I (Compris) Computer Literacy (Drake/Pluto) Employability Skills (Invest)	Mechanics (Drake) Cross Training
LEVEL III	GED Reading (Invest) ABE Writing (Invest - Part 2) GED Math (Invest - 10.5) Learning to Learn (Classroom)	Communication Skills (Plato/Drake) Critical Thinking II (Compris) PC Instructor & Professor DOS (TRO) Business Basics (IMSATT)	Blueprint Reading & Mechanics (Drake) Cross Training
LEVEL IV	GED Reading (Invest - 11.5) GED Writing (Invest) Statistical Methods for Improving Productivity-(Drake) Presentation Skills (Classroom) Learning to Learn (Classroom)	Communication Skills (Plato/Drake) Critical Thinking (Conover) PC Instructor & Professor DOS (TRO) SPC (IMSATT) Instrumentation (IMSATT)	Hydraulics & Pneumatics (Drake) Cross Training
LEVEL V	Presentation Skills (Classroom) Advanced Math (Drake/Plato) (Calculus) Science (Drake/Plato) (Physics & Chemistry) Learning to Learn (Classroom)	Computer Skills (Pascal, Fortran, Lotus 123, Dbase IV)	Microprocessors, Variable Frequency Drives, & Program-mable Controllers I & II (Drake)

10

'11

OPTIONAL/SUPPLEMENTAL TRAINING

BASIC	FUNCTIONAL	TECHNICAL
LEARNING SKILLS **Test Taking Strategies (Invest) (CBI)** **Learning Styles Inventory (Educational Activities) (CBI)** **READING** **Intensive Phonics (HEC) (CBI)** **I Want to Read (Educational Activities) (Video)** **PC Globe (CBI)** **PC USA (CBI)** **Effective Reading (Xerox) (audio) (Speed Reading)** **WRITING (Invest) (CBI)** *Writing Letters* 　*Address an Envelope Correctly* 　*Write a short Personal Letter* 　*Write Business Letters* 　*Write a Letter of Application* 　*Write a Thank You Letter for an Interview* 　*Write a Letter of Resignation* 　*Filling Out a Simple Job Application Forms* 　*Preparing a Personal Data Sheet* 　*Filling Out a Job Application* **Language Experience** **Read Personal Experiences** **Listen to Experience Based Stories** **Work With Syntax and Composition** **Work With Alphabetical List of Words** **Creating, Editing and Printing** **Process Writing** **Write a Paragraph of Opinions** **Write Paragraphs Describing Personal Experiences** **MATHEMATICS** *Basic Algebra (Invest) (CBI)* *Algebra (Invest) (CBI)* *Algebra (Video Tutorial Services)* *Fractions, Decimals, Operations (Video Tutorial Services) (Video)*	**LIFE SKILLS (Invest) (CBI)** *Being a Good Consumer* 　*Choosing Financing* 　*Buying a Used Car* 　*Car Contracts, Insurance and Registration* 　*Budgeting* 　*Smart Buying Habits* 　*Setting Spending Goals* 　*Choosing and Using a Checking Account* 　*Credit, Credit Cards and Credit Applications* 　*Advertising Truth and Deception* 　*Warranties and Guarantees* *Health and Safety* 　*Emergency First Aid* 　*Child and Home Safety* 　*Bicycle, Traffic, Fire and Water Safety* *Community Resources* 　*How to Get a Driver's License* 　*Finding the Goods and Services You Need* 　*Contacting Emergency Services* *Personal Development* 　*Self-Esteem* **COMPUTER LITERACY** *WordPerfect 5.1* *Multimate* **COMMUNICATION SKILLS** **Listening and Notetaking (Educational Activities) (Video)** **RESEARCH SKILLS (Invest)** *Using the Dictionary* *Using Other References* *Types of Materials Available in a Public Library* *Using the Card Catalog* *Using a Dictionary/Encyclopedia* *Using a Thesaurus* *Using an Encyclopedia* *Using a Reader's Guide* *Parts of a Book* *Using the Library* *Using an Atlas* *Computerized Card Catalog*	*Geometric Dimensioning and Tolerance Fundamentals (Drake) (CBI)* **Family of Jobs Training Manuals (OTD) (Print)**

"xxxxx" -- Courses in bold face type are intended to supplement the principal learning materials.
"yyyyy" -- Courses in italics are optional that can be taken on the learner's own time.

TRAINING LEVEL I: Literacy Task Analysis

Jobs Covered: All new hires, Laborers, Third & Fourth Hands, Clean-up & Utility Operators, Grand Manor Operators.

Key Characteristics: These are entry level positions that involve only basic reading, writing, or computational applications. These include: understanding a (limited) technical vocabulary; literal comprehension of written materials at the 8th - 9th grade level; some ability to compare and contrast; single-step, single-source information transfer; understanding of whole numbers, fractions, decimals, and percents; and ability to make accurate weight and size measurements. Technical skill requirements are limited to the use of basic hand tools, such as a wrench or a scraper, and the ability to operate a fork-lift and other (specialty) trucks. This means that, at a minimum, persons performing these jobs must read and write well enough to obtain the necessary operator's licence and to complete the "Driver Daily Checklist." Functional skill requirements are also very basic, focusing mainly on oral communication skills since all jobs at this training level require the ability to be understood orally and to follow oral directions. Work in these positions involves little or no latitude or judgement with regard to attainment of standards or in selecting appropriate tools or materials.

Results of Readability Analysis: All CertainTeed/SMG employees are asked to read and comprehend a variety of general work-related reading material. The readability assessment conducted on a variety of these general materials resulted in reading levels ranging from a low of 9.4 to a high of 11.7. For example, in order to read and comprehend the "Hourly Employee Handbook", an employee must be able to read between the 11th and 12th grade levels (readability tests are generally reliable to within approximately + or - one grade level). In addition, a reading level of 11.7 is required for reading the printed safety booklets, 10.9 for general policy statements, and 11.5 for general bulletins and notices. Employee currently reading below these grade levels will have difficulty reading and comprehending these materials.

THE COMPETENCY STATEMENTS BELOW REPRESENT THE FULL PERFORMANCE LEVEL FOR THE JOBS AT THIS TRAINING LEVEL.

BASIC SKILLS

Learning

o Recognize and distinguish between different learning styles, and identify personal, preferred learning style.

o Organize learning activities.

Reading

o Distinguish between different reading purposes (reading to learn, reading to do, reading to assess).

o Recognize common words and meanings, task-related words with technical meanings, and meanings of common abbreviations and acronyms.

o Follow sequential directions and/or illustrations to complete a task.

o Locate pages, titles, paragraphs, figures, or charts needed to answer questions or solve problems.

o Use a completed form to locate information to complete a task.

o Use a table of contents, index, appendix, glossary, system or subsystem.

o Determine the presence of a defect or extent of damage.

o Classify or match objects by color, size or significant marking.

o Use common knowledge for safety.

o Apply preventive measures prior to task to minimize problems.

o Select appropriate course of action in an emergency.

o Identify details, labels, and numbers.

o Follow sequenced illustrations as a guide.

Writing

o Enter single, job-related words to a form.

o Legibly record short spoken statements.

Computation

o Read, write and count single and multiple digit whole numbers.

o Add, subtract, multiply and divide single and multiple digit numbers.

o Read and write common fractions.

- 2 -

14

o Read and write decimals in one or more places.

o Read and write percents.

o Read numbers or symbols from a weight measuring scale.

o Use a measuring rule to determine an object's physical dimensions in standard units.

o Read and tell time.

FUNCTIONAL SKILLS

Communication

o Listen for content.

o Follow spoken directions.

o Extract information from extended message.

o State information concisely and efficiently.

Group Effectiveness

o Contribute information in keeping with the topic.

o Express opinions and judgements (uses feelings or intuition.)

Problem-solving and Analytical Thinking

o Recognize task specific problems and take appropriate action.

TECHNICAL SKILLS

Use of Tools or Equipment

o Measure materials with a tape measure to within 1/16 of an inch.

o Use hand tools, such as wrench, screwdriver, and scraper, to make minor adjustments to equipment, to do assigned preventive main-tenance, or for clean-up.

o Operate, and provide Total Preventive Maintenance (TPM) for, fork-lift, steam cleaner, sweeper, and scrubber trucks.

o Cut or trim material using knife or cutting tool.

Machine Knowledge & Interface

o Use hands or hand tools to clean, remove, or carry objects or materials.

- 3 -

o   Insert or remove materials from machinery.

o   Throw, dump, or place materials into a dumpster.

o   Operate, and provide Total Preventive Maintenance on, a
    Shrink Wrap Machine.

WORK MATURITY COMPETENCIES

o   Accept criticism without showing anger, blaming others, or
    making excuses.

o   Do not complain when asked to complete a task, and perform
    tasks as requested.

o   Show interest and enthusiasm in the job.

o   Follow both verbal directions and written plant policies.

o   Ask for more information when needed.

o   Complete job tasks timely.

o   Reliable. Report to work as scheduled and give reasonable
    notice when must be absent; Start and stop work at the
    scheduled time; Leave and return from all breaks at the
    correct time.

o   Use tools and equipment safely and correctly.

o   Keep work area clean and safe.

o   Cooperate with other employees.

o   Respect the property of others.

PHYSICAL DEMANDS

o Exert up to 100 pounds of force occasionally and 30 to 50
   pounds of force frequently.

o Climb, balance, stoop, kneel, crouch, crawl and reach.

o Identify and distinguish colors.

o Tolerate noise, vibration, and some limited exposure to
   weather.

- 4 -

EXAMPLES OF LITERACY COMPETENCY STATEMENTS

1. Given a task statement: <u>Empty Scrap Dumpsters</u>, list the sequence of steps required to perform the task, the potential accidents or hazards involved, the recommended procedure to accomplish the task safely.

2. Given a list of job-specific terms, define each one with 100% accuracy.

3. Given a forklift and a <u>Driver's Daily Checklist</u>, perform the required operational checks completely and accurately.

4. Given a pencil and paper, list, in proper sequence with no omissions, the steps required to help the wrapper/palletizer make a wrapper paper slice.

5. Given a stack of pallets, count the number of pallets in the stack with 100% accuracy and determine how many need to be added.

6. Given a wrapped bundle of shingles, identify and describe the meaning of the following information ... with no errors.

EXAMPLES OF JOB PERFORMANCE COMPETENCY STATEMENTS

1. Given a forklift, empty a scrap dumpster to the supervisor's satisfaction.

2. Given verbal instructions, position dumpsters where needed to the supervisor's satisfaction.

3. Given a JSA and a set of written procedures, properly and safely set up the tape for a wrapper splice with no assistance from the supervisor.

Inspector - Literacy Skill Competency Requirements

Inspectors must be able to:

1. Count the number of shingles in a 27 count bundle.

2. Read a scale's digital read-out in decimals to at least two places.

3. Record bundle weights to a report.

4. Measure the length of six consecutive shingles.

5. Add shingle lengths.

6. Compute the average length of shingles and record the information to a report.

7. Compute the average of four bundle weights.

8. Compute the range of four bundle weights.

9. Measure the length and width of shingles to within plus or minus 1/16th of an inch.

10. Record shingle lengths and widths measured in inches to a report.

11. Measure the length the end knife cut, and the width and length of the tabs and the distance of the tab from the end of the shingle against product specifications.

12. Record data measured in inches to a report.

13. Measure the head lap from the top of the shingle.

14. Record percentages on a report.

15. Measure the exposed area of a shingle to the top of the head lap or the shadow line and record measurements to a report.

16. Measure the scrap area.

17. Tear off and cut a piece of shingle 2" by 10".

18. Read a scale's digital read-out to the nearest .1 of a gram.

19. Record decimals in grams to report.

20. Subtract the scrubbed weight from the pre-scrubbed weight and record the difference to report.

21. Measure the thickness of the sealant using a micrometer.

22. Measure the thickness of the non-sealant surface using a micrometer.

23. Compute the average of all the sealant calipers and record to a report.

24. Read and interpret a chart to determine sealant type and record to a report.

25. Read and interpret product specifications and process and process targets and specifications.

26. Read and interpret the sheet temperature gauge (in degrees fahrenheit) to ensure it is within target.

27. Measure drops in inches to product specifications.

28. Read and interpret wraps and code dates.

29. Read and record data from the 5TI.

30. Read and record data from the wrapper counter.

31. Convert inspector's waste to number of bundles.

32. Read and interpret all JSA's.

33. Read and construct X-bar and R-bar charts.

Inspector - Literacy Skill Applications

1. Add, subtract, multiply, and divide whole numbers, fractions, decimals and percents.

2. Compute the average and the range for a given set of numbers.

3. Read and construct X-bar and R-bar charts.

4. Read, write and interpret whole numbers, fractions, decimals, and percents to at least two places.

5. Write whole numbers, fractions, decimals and percents to reports.

6. Use a measuring rule to determine an object's length and/or width in inches to within plus or minus 1/16th of an inch.

7. Read, write, and interpret grams and millimeters.

8. Use a micrometer to determine the thickness of an object in millimeters.

9. Read and interpret a chart to determine sealant type and record information to a report.

10. Read and interpret product specifications and process targets and specifications.

11. Enter various data (fractions and decimals) into a computer using a keyboard or a punch pad.

12. Read and interpret temperature in centigrade and fahrenheit.

13. Read and interpret wraps and code dates.

14. Read and record data from the 5TI and from the wrapper counter.

15. Convert inspector's waste to number of bundles.

16. Read and interpret JSA's.

MARKETING AND PROMOTION
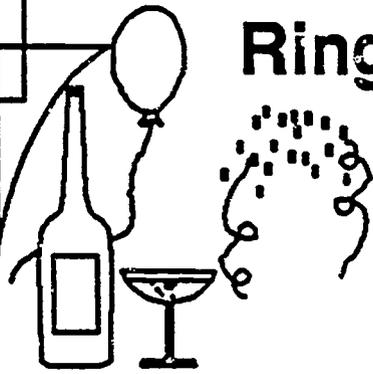
Ring In The New Year!!
With
Classes In Fractions
At
The S.K.I.L.L. Center

When?

January 1992

Jan. 14...Intro To Fractions

Jan. 16...Addition And Subtraction

Jan. 21...Multiplication

Jan. 23...Review Of Fractions

SIGN UP NOW!!!

Counts Toward S.K.I.L.L. Participation Time!!!!

☆ SIGN UP SHEET ☆

Complete And Return to Box In The S.K.I.L.L. Center or Break Room

Name..

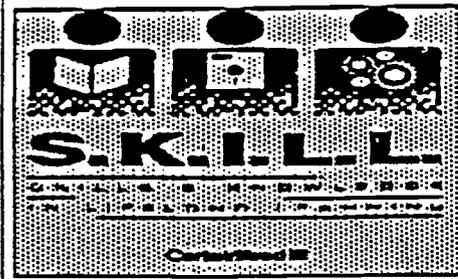| ✓ Please Check One:	Circle Session You're Interested In:
___5:30am to 7:00am	Jan 14 Jan 16 Jan 21 Jan 23
___1:30pm to 3:00pm	Jan 14 Jan 16 Jan 21 Jan 23
___9:30pm to 11:00pm	Jan 14 Jan 16 Jan 21 Jan 23

The Sessions Listed Above Will Be Taught At These Hours

⚡ SIGN UP NOW ⚡

Please See Your S.K.I.L.L. Center Instructors

For Additional Information.

Welcome to the first edition of the monthly S.K.I.L.L. Project newsletter. The main focus of this newsletter will be to provide you with information about the S.K.I.L.L. program. Within any organization communication is one of the leading problems and we have found this to be the case with S.K.I.L.L.. Through your feedback we have found there to be a lack of communication as well as misinformation concerning this program.

A section of this newsletter will be devoted to airing your questions and concerns. We are providing several methods for you to give us feedback on what you think about S.K.I.L.L., what you think we can do to improve the program, as well as what you think we are doing right. The fastest way to have your concerns addressed is to see Mike or Fred. However a suggestion box is available for your comments.

_____

S.K.I.L.L. Logo ..

At the top left of the page is the new logo we will be using on all publications pretaining to the S.K.I.L.L. program.

The book, computer disk, and gears represent the three areas of skill the S.K.I.L.L. program is addressing.

⇨ Basic Skills
- reading, writing, math

⇨ Functional Skills
- communication, problem solving, analytical thinking, team building, and computer literacy

⇨ Technical Skills
- job knowledge

Have You Seen ..

The S.K.I.L.L. bulletion board across from the breakroom? Actually with the bright colors that were used it would be hard to miss. Watch this board for usefull information and updates about the program.

Updates will be posted on one of the three bulletion boards as changes within the S.K.I.L.L. program occur and the theme of the boards will change once a month.

Your help is needed ... Your help, ideas, and talent is needed in changing this board each month. If you are interested in being a part of this see Mike O'Brian.

Even though we would like to see more people using the resourses available in the S.K.I.L.L. Center we are encouraged by the number of participants thus far and the progress that is being made.

Below is a graph detailing how many people have used the Center and the time of day they are using it.

SKILL CENTER USAGE
TIME OF DAY

	5-7am	7-9am	9-1pm	1-3pm	3-5pm	4-5pm	4-9pm	9-11pm
participants	58	16	44	86	52	86	14	39

Hours Of The Day
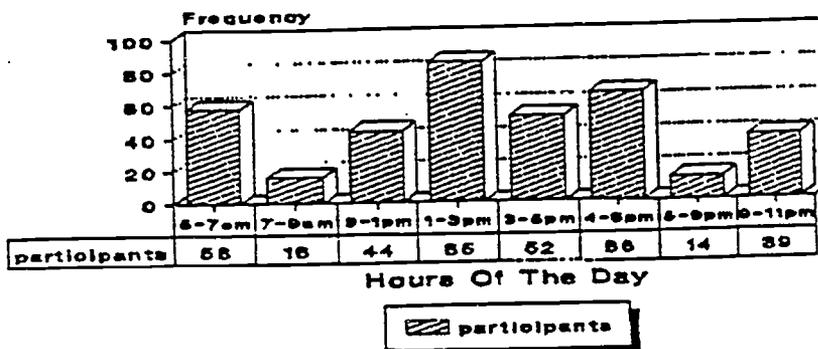
participants

Sept. 23 - Nov. 1, 1991

Congratulations !!!

Congratulations are in order for Loyd Washburn. Loyd recently achieved a milestone as a participant in the S.K.I.L.L. Program when he completed all lessons in the Health and Safety program. Bear in mind this is no small feat as Health and Safety is very extensive and to complete this in less than a month required quite a commitment of Loyd.

So for those of you who had doubts there is light at the end of the tunnel after all.

In addition to Health and Safety, Loyd has also completed all the functional skill requirements for his training level.

When Is The S.K.I.L.L. Center Open ???

The Center is open Monday through Thursday from 5:30am to 11:00pm. Fridays the Center is open from 5:30am to 5:30pm.

Instructors from Vance-Granville Community College are in the Center from 5:30am to 9:00am and 1:00pm to 11:00pm Monday through Thursday. On Friday the instructors staff the Center starting at 5:30am and going till 9:00am and from 1:00pm to 5:30pm.

We have decided not to open the Center on Saturdays as no one was coming in. V.G.C.C. has provided the S.K.I.L.L. Project with 62 hours of instructor time each week so we couldn't afford to staff the Center on Saturday if no one was using it. As the weather gets colder you may decide Saturday is a good time to come in after all. Just let us know and we will try to accommodate you.

2

Suggestion Box ...

We want to know what you like and don't like about S.K.I.L.L.. What are your concerns and what are your needs? In an effort to improve communications a suggestion box is being installed by the breakroom. You can use this box to communicate your comments. We would like to serve you better so let us know what's on your mind.

The suggestion box is under construction and will be installed within a week or so. Also you will be able to recognize the box as the S.K.I.L.L. logo will be painted on the front.

Quoteable Quote

Excuses increase as stability decreases !

Meet The S.K.I.L.L. Instructors

Amy Dazsy comes to us from Ellerbe N.C.. Amy attended St. Andrews Presbyterian College where she earned a B.A. in Psychology and a B.A. in Business Administration. She taught GED and ABE (adult basic education) at Richmond Community College, and besides being a S.K.I.L.L. instructor Amy now teaches GED and ABE for V.G.C.C. at Mary Potter.

Quay Doizer recently moved from Elizabeth City N.C. where she spent two years teaching ABE and GED (general education development). Quay has lived in Oxford before and worked with Harriet Henderson's literacy program. With a B.A. from the College of Albemarle she comes to us well qualified.

Have You Heard ??

The date for the S.K.I.L.L. grand opening has been set as November 11, 1991. N.C. Representive Tim Valentine has commited to come. All employees along with their families should have recieved invitations so please plan to attend and show your support for this event. There will be a ribbon cutting ceremony followed by lunch (bar-b-que). After a plant tour by the guests the plant will be shut down so all employees can attend.

3

Announcing

The S.K.I.L.L. Quiz

We thought one way to help familiarize everyone with topics relating to the S.K.I.L.L. Program and make it enjoyable was to put the information in the form of a quiz and give prizes.

Answers to all the questions can be found in this newsletter or in the S.K.I.L.L. building. The best way to correctly answer the questions is to participate in the S.K.I.L.L. Program. However Mike, Fred, or the instructors will be glad to help you find the answers. Completed quizzes can be dropped in the suggestion box or given to Mike, Fred, Amy, or Quay.

Three winners will be selected at randon by a drawing on December 9, 1991. The first three quizzes drawn with all correct answers will win. We don't know what the prizes are yet but we will come up with something.
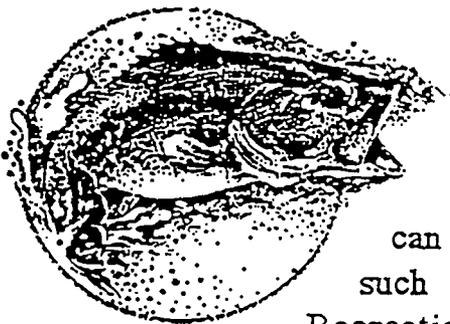
Last Word ...

Fishing is one of those things most of us can relate to because it's such a relaxing pastime. Recreation is an important aspect of our lives as it helps us maintain a healthy balance with work. We all make choices, about how much we work, how much we play and these choices help determine the path we travel in life. Another choice we make is the amount of training and education we give ourselves in preparation for the future.

If we were to say the average age of the Oxford employee is 32 years and with retirement age being 67 then we have an average of 35 years left to work before we retire. I look back at the changes I've seen in just the last 5 years in the way we make shingles and wonder what the next 5 to 10 years will bring. We now use I.D.T.s which allow us to use computers to monitor and interface with the process of making shingles. We just went through the process monitoring training which will allow us to build a massive database of historical data which we can use to help us make better decisions. We are using equipment that wasn't even designed 6 or 7 years ago. To stay competive and survive as a company we need employees who can understand and use the technology the future will bring us. This is what the S.K.I.L.L. Program is about. It gives us the opportunity to grow along with the ever changing workplace so we can stay competive as a company and this should make us more secure about still having a job 10 to 15 years from now.

S.K.I.L.L. QUIZ

Drop completed quizzes in the suggestion box or return to Mike, Fred, Amy or Quay. See the S.K.I.L.L. newsletter for more details

1. Which of the following commands will allow you to enter the Health and Safety program? (circle one)

   1. ESC
   2. CMI
   3. INV

2. Two of the three software companies below have computer programs in the S.K.I.L.L. Building. Which company does not ? (circle one)

   1. Jostens
   2. Drake
   3. Timeworks

3. During 1988 there were 259,000 motorcycles registered in the state of Ohio. During this same period of time how many were registered in North Carolina?
   (the answer can be found in the PCUSA program)

   _____

4. Besides being a S.K.I.L.L. instructor Amy Dazy ...   (circle one)

   1. Teaches Judo on Thursday nights
   2. Plays a piccolo from Pakistan
   3. Teaches ABE and GDE at Mary Potter

5. How many times was S.K.I.L.L. used in the Nov. newsletter.
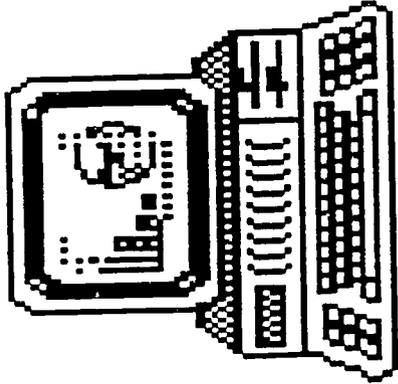
   _____

Name :

_____

5

STEAK DINNER PROMOTION
For Month of July

The crew with the highest % participation in S.K.I.L.L. for July wins a steak dinner cookout. To be cooked by the S.K.I.L.L. Steering Committee.

Participation = 12 hours per month

30

29

FEED YOUR MIND

FEED YOUR BODY

December 17, 1991

Dear Eugene,

We miss you over at the S.K.I.L.L. Center !!

You started out great, but you haven't been in since
October 17, 1991. We hope you will reconsider and start coming in again.

We know that it is very hard to find the time to participate, but it will pay off for you.

During the holidays, take some time to think about your future. Things are getting so
technical and complicated that a person really needs a lot of education and training just
to survive.

Your S.K.I.L.L. Center provides you with the training you need to really improve your
reading, writing and math skills, as well as your job skills --- and best of all, its free!!
In fact, you even get paid for coming! Sounds like a pretty good deal to us.

How about giving it another try? You won't regret it. See you in the S.K.I.L.L.
Center.

Sincerely,

Your S.K.I.L.L. Center Instructors

33

CertainTeed

January 21, 1992

Ms. Jennifer Copeland
Vance-Grandville Community College
P.O. Box 917
Henderson, NC 27536

Dear Jennifer:

It is always great to work with you, and we look forward to co-sponsoring the upcoming conference/workshop on literacy. CertainTeed will gladly contribute approximately $ 1000 to the cost of putting the conference together.

We also understand, that we will be responsible for supplying the brochure from your design. Please call if there is anything else that we can do to help.

Sincerely,

Bob Salstrand
Corporate Training Manager

BS/mtm

34

VGCC, CertainTeed To Sponsor Workplace Literacy Seminar

What possibly may be one of the most significant seminars ever planned for area businesses and industries with regard to their economic future is slated at Vance-Granville Community College on Tuesday, March 10, according to Dr. Ben F. Currin, president.

The event will be a day-long conference on workplace literacy, co-sponsored by the college and CertainTeed Corp. of Oxford, one of the nation's major manufacturers of building materials.

"More and more we are hearing from companies concerned about the emerging gap between the skills of their workers and the jobs they are expected to perform. This seminar is designed to help employers solve that problem," Dr. Currin emphasized.

Beginning at 9:30 a.m. in the college civic center, the seminar is intended to be an experience of learning and sharing as participants focus on the theme, "Strengthening the Work Force through Basic Skills Education."

"Information will be provided those who may be interested in initiating workplace literacy projects as well as those who are already sponsoring or teaching in such programs," noted Jennifer Coplin, college coordinator of Work Force Literacy.

The morning will be a practical session to help participants decide whether they need to offer basic skills to their work force.

Featured will be a panel discussion chaired by Dr. Fred Frederick of Washington, D.C., former vice president of the National Alliance of Business, and currently an independent workplace literacy consultant retained by CertainTeed.

Dr. Frederick, along with Deborah Gaddy, a longtime, successful practioner of workplace literacy, will head a discussion on how to implement the workplace literacy concept on whatever scale most applicable to a business. Topics will focus on conducting a needs analysis for a literacy project, funding, locating resources, choosing the delivery system, scheduling and incentives.

The luncheon hour promises to be a relaxed time of informal sharing with a meal catered by Hazel's Tea Room and a background of classical guitar by Joseph Hoey, who works part time in research at the college.

In the afternoon, Emily Paynter, a consultant specializing in adult education, will discuss the needs and challenges incurred in offering basic education to adults. During this session, which is designed to help employers determine how to attract and keep students in the program, professionals from the field will talk about adults as learners and how to plan an enriching experience for both them and the company.

As an added attraction, exhibitors of learning systems will be on hand to demonstrate some of the equipment and approaches currently used in workplace literacy projects.

Interested persons are asked to contact Coplin at the college to register. She may be reached Tuesday through Thursday at 492-2061 or 693-6757.

Partnership In Learning

"That CertainTeed has volunteered to co-sponsor this conference with Vance-Granville reflects not only its continued interests in the community, but also the successful partnership between industry and education," said Dr. Currin.

VGCC and CertainTeed are currently partners in what has been described as one of the nation's most exemplary workplace literacy programs that can be found in an industrial setting.

After months of work and planning, the project became a reality last year when CertainTeed officially opened its new training center, built on the site of its Oxford roofing plant. Housed in the center is a computer lab, the latest in computer integrated learning systems, and a traditional classroom setting.

Within this facility are taught both the basics and the advanced skills incorporated into the project, which the company appropriately has named SKILL, or Skills and Knowledge in Lifelong Learning.

Rather than just labeling the project as a literacy program, CertainTeed considers it to be skill development program that begins with the basics in reading, writing and math, and continues to include what are termed as functional skills, or those which facilitate teamwork, computer usage and critical thinking.

Another facet of the program involves technical training in which employees are retrained, cross-trained and trained for advancement on the shop floor. Workers also can prepare themselves for promotion by meeting the requirements of the level of jobs above their own.

Vance-Granville assists in the project by providing instructors and other assistance to help employees gain the skills and knowledge needed for increased productivity and quali-

Democrats Hold Precinct Meetings At 7

Granville County Democrats will hold their annual precinct meetings at the regular polling places at 7
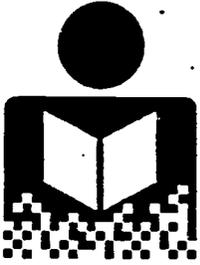
STRENGTHENING THE WORKFORCE THROUGH BASIC SKILLS EDUCATION
Sponsored by CertainTeed Corporation
and Vance-Granville Community College

AGENDA

Tuesday, March 10, 1992

9:30   Coffee and registration
        Visit the exhibits table
        Meet other participants

10:00   Welcome by Dr. Ben F. Currin, President
        Vance-Granville Community College
        Seminar Room, Civic Center

        Workplace Literacy: A to Z

        Conducting a needs analysis, funding, locating
        resources, choosing the delivery system,
        scheduling and incentives.

        Dr. Fred Fredrick, Ed. D.. workplace literacy
                        consultant
        Deborah Gaddy, director/instructor, workplace
                        literacy-Sara Lee and Forsyth
                        Community College
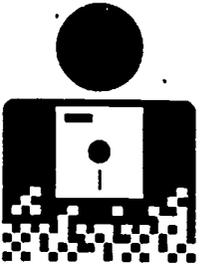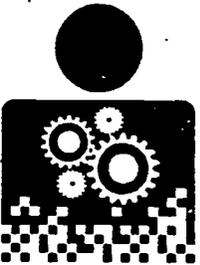
12:00   Lunch
        Foyer of Civic Center
        Joseph Hoey, classical guitarist
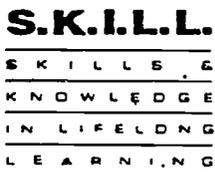
1:00   Creating the Meaningful Educational Experience
        Seminar Room, Civic Center

        A focus on literacy and the individual, looking
        at how to make these programs meaningful for
        individuals and the issues which will probably
        surface in the classroom.

        Dr. Emily Paynter, Ph.D., Special Learning
                        Services

3:00   Demonstration
        VGCC Computer Lab

        Computer Curriculum Corporation will sponsor a
        demonstration of a computer assisted learning
        program.

        Richard Hall, CCC

S.K.I.L.L.
S K I L L S   &
K N O W L E D G E
I N   L I F E L O N G
L E A R N I N G

CertainTeed

36

OXFORD PLANT LAUNCHES S.K.I.L.L. PROGRAM

SMG's Oxford facility officially launched its workforce literacy program with a special ribbon-cutting ceremony held last fall at the plant's new on-site learning center. U.S. Representative Tim Valentine joined CertainTeed officials and guests at the kick-off celebration.

S.K.I.L.L. – Skills and Knowledge In Lifelong Learning – is an 18-month pilot program designed to help plant employees improve their overall workplace abilities.

The special learning center houses seven computer workstations and three interactive videodisc stations. A major part of S.K.I.L.L. training involves a self-instruction program, where employees use computers to work through literacy problems and job-related assignments.

S.K.I.L.L. is a voluntary program, open to all plant employees. Each participant has access to the learning center for six hours per week, with half of that time incorporated into the individual's work schedule.

The program was designed by David Morman, a career federal employee who was assigned to CertainTeed for one year through a Presidential Executive Exchange program. Now that Morman has returned to his government position, Mike O'Brian, the learning center manager, will handle S.K.I.L.L.'s day-to-day operations. Mike will be assisted by two instructors from the Vance-Granville Community College, who provide one-on-one instruction and small-group tutoring at the learning center.

If S.K.I.L.L. proves successful, CertainTeed may implement similar workforce literacy programs at many of its North American plants. ■

HAPPY BIRTHDAY, GRAND·MANOR

Grand Manor Shangle™ is now one year old. To mark the event, SMG announces some exciting changes to Grand Manor effective in 1992.

Special Lifetime Limited Warranty Is Introduced

Grand Manor now carries a lifetime limited transferable warranty to the original homeowner-purchaser for shingles sold in the United States and Canada (see warranty for specific details and limitations). No other asphalt shingle in the industry carries such a warranty.

"The Grand Manor warranty was changed especially to enhance protection for the homeowner who originally purchases the shingles," says Marcia Hannah, director of marketing for the Residential Roofing Division. "When a homeowner has Grand Manor installed, it represents a significant investment. By providing this lifetime limited warranty, CertainTeed is helping to protect that investment."

Grand Manor's exclusive SureStart™10 warranty provision, which provides "upfront" protection against manufacturing defects for 10 years following application of the shingles, continues under the new warranty. As before, the warranty is transferable by the original purchaser only during the first 10 years following shingle application. In the case of Grand Manor, such a transfer changes the warranty duration from "lifetime" to 30 years.

Grand Manor Goes West!

Grand Manor has gone Hollywood – sort of.

As the result of a recent agreement with the South Coast Shingle Company, Inc. of Long Beach, Calif., Grand Manor is now available on the West Coast – becoming the only shingle in the CertainTeed Roofing Collection™ to be distributed west of the Rockies.

According to Harry Kegler, vice president of sales for the Residential Roofing Division, Grand Manor is well-positioned for its new market. "Grand Manor is an ideal roofing product to compete for the larger, estate-scale homes and prestigious commercial properties so prominent in the Southern California area," he says. "In fact, South Coast Shingle had many inquiries about Grand Manor even before they received their first truckload of shingles."

The West Coast distribution agreement and new warranty are just two of the important changes for Grand Manor in 1992. Several new sales support materials – including a special carrying case and a sample board – will soon be available, while new print advertisements are planned for trade publications such as *Professional Builder & Remodeler*, *Progressive Architecture* and *Western Roofing*, and for consumer publications such as *Architectural Digest*. ■

A second chance for learning...on the job: New SKILL center opens at Oxford

For the Shelter Materials Group in Oxford, North Carolina, knowledge is power – and, also, improved on-the-job performance capabilities.

The roofing plant recently opened the SKILL (Skills and Knowledge in Life-long Learning) center, a pilot facility in CertainTeed's workforce education program. Using computer workstations and interactive video programs, employees have the opportunity to study a wide range of topics, from basic reading and calculus to hydraulics and life-coping skills.

Enrollment is strictly voluntary; employees are free to participate at their convenience before work, after work, or on their days off.

Prior to joining the program. employees take a test to assess their skills. Then. an instructor and an educational consultant work with each participant, one on one, to devise a personal development plan.

Employees train at their own pace and are paid for half of the hours they spend at the center.

The center is managed by Training Supervisor Mike O'Brian and staffed by instructors from the local community college. "This program is really a partnership with Vance Granville Community College, which donates 62 hours a week of instruction time (to the center) and funding for the development of written materials," O'Brian said. Seven computer workstations and three interactive video stations are housed in the specially built facility, which was constructed with CertainTeed products. All materials and training are provided to employees free of charge.

If this pilot program meets company expectations, similar programs may be introduced at other Saint-Gobain facilities throughout the United States and Canada. The SKILL program was originally developed by David Morman of the U.S. Department of Labor when he was a "loaned executive" to CertainTeed.

S.K.I.L.L.

SKILLS & KNOWLEDGE IN LIFELONG LEARNING

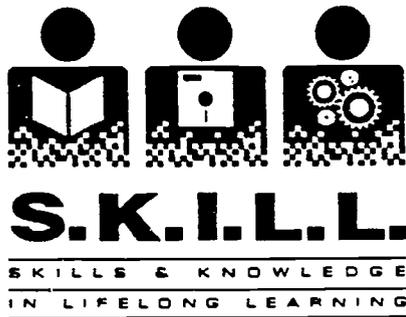Above: The new SKILL center at SMG's facility in Oxford, North Carolina.

At right: Bill Ricketts, (l) SMG Vice President of Operations, and North Carolina Congressman Tim Valentine cut the ribbon on opening day.

It's thumbs up for Warren Claiborne, SKILL participant.

Irving Lee Green (l) works at a computer terminal while co-workers Donald Roberts (m) and James Renn (r) look on.

BEST COPY AVAILABLE

EVALUATION

The evaluation is intended to determine two things: (1) is learning taking place, and (2) is the learning being transferred to the workplace in terms of measurable increases in individual and group performance, and positive changes in SMG "cost drivers."

The evaluation model includes the following indicators:

<u>Learning Gains</u>

- A comparison of test results from the Test of Adult Basic Education (TABE). Approximately 197 employees took the TABE, prior to the opening of the S.K.I.L.L. Center, as a pretest in August of 1991. A posttest, an alternate version of the TABE will be administered in April of 1993 which will be 18 months after the beginning of the program.

  We will compare the reading, math, and language gain scores of S.K.I.L.L. participants and non-participants.

  Our research hypothesis is that the mean TABE gain scores of S.K.I.L.L. participants will be significantly higher than the mean gain scores of non-participants.

- A longitudinal analysis of S.K.I.L.L. Program usage. We will use data captured and stored in our computerized management systems to show descriptive data about:
  - the number of lessons and/or modules mastered or completed;
  - learner growth or gains in the basic skill areas;
  - time on task;
  - number of individuals who have completed their level's training requirements;
  - participation levels.

- An analysis of the impact of our OJT training program. We will use supervisory appraisal data and performance-based checklist data to determine the impact and effectiveness of our OJT training program.

<u>Productivity and Performance Measures</u>

- We will analyze the following data:
  - attendance rates;
  - number of accidents;
  - overall performance ratings;
  - results of the Supervisory Survey;
  - results of the Employee Self Appraisal Survey;

1

- results of the all employee Plant Survey;
- process improvement team performance.

● Avery is being used as a control group and is collecting data on attendance rates, number of accidents, and overall performance ratings. A comparison over time will be made between Oxford (experimental group) and Avery (control group). The pre-S.K.I.L.L. benchmark time frames are the first quarters of 1990 and 1991. The post-SKILL benchmark time frames are the first quarters of 1992 and 1993.

Our research hypothesis is that Oxford's post-S.K.I.L.L. performance data will be significantly better than Avery's.

● A comparison will also be made between the attendance rates, number of accidents, and overall performance ratings of S.K.I.L.L. participants and non-participants.

Our research hypothesis is that the performance data of S.K.I.L.L. participants will be significantly better than the performance data of non-participants.

● We have constructed a survey that measures a number of work-related behaviors. This survey is being administered to all employees. In addition, the same survey is being completed by supervisors for the individuals they supervise. These surveys will be administered over time. The first set of surveys were administered the week of April 6, 1992. This covers the first 6 months of program operations. The surveys will be administered again in 6 months, and then again in 6 months (April 1993).

Our research hypothesis is that the mean scores of the Supervisory Survey and the Employee Self Appraisal survey will be significantly higher for S.K.I.L.L. participants than for non-participants.

● The relationship between Process Improvement Team participation and performance and participation in S.K.I.L.L. will be explored. High performing teams and low performing teams will be identified using some sort of criteria. Examples of criteria include: number of suggestions generated, number of suggestions implemented, quality of suggestions, actual cost savings, etc. We will then search for variables that discriminate between high and low performing teams. Examples of variables to explore include: S.K.I.L.L. participation, TABE gain scores, gain as measured by the computer management system, participation in programs such as Frontline Leadership and Working.

Our research hypothesis is that high performing teams will have a higher number of S.K.I.L.L. participants, etc. than low performing teams.

2

41

SMG Cost Driver Data

The purpose of this part of the evaluation is to determine if there is a relationship between participation in S.K.I.L.L. and positive changes in the selected cost driver variables. The CertainTeed computer system contains appropriate data on all of the selected variables by product, crew, and line. In addition, most of the variables can be linked directly to operator error.

One approach to this problem is to identify high and low performing crews over time and analyze the variables that discriminate between the two.

Another approach is to group crews based on S.K.I.L.L. participation and analyze differences in performance of crews with high levels of S.K.I.L.L. participation and low levels of participation.

In addition, we will capture Oxford plant benchmark data pre-S.K.I.L.L. and post-S.K.I.L.L. using the same time periods as we will for attendance, etc. We will then compare the results of pre and post data.

Finally, we will compare cost driver data over time between Oxford and Avery. Oxford will be the experimental group and Avery the control group.

Our overall research hypothesis is that participation in S.K.I.L.L. will have a positive impact on the cost driver data.

3

S.K.I.L.L. Program Evaluation Overview

We Will Try To Answer Two Questions:

1. Has Learning Taken Place?

2. Has the Learning Been Transferred to the Workplace in Terms of Improved Performance and Productivity?

Evaluation Time Frames

- Program Started 9-23-91

- Evaluation Period Ends 3-31-93

- Analyze Data and Prepare Final Report - 4-93

Learning Gains

1. Test of Adult Basic Education Scores

   ● We will compare the reading, math, and language gain scores of S.K.I.L.L. participants and non-participants.

2. S.K.I.L.L. Program Usage

   ● We will use data captured and stored in our computerized management system to show the following types of gain data:

   - nunber of training modules mastered.
   - learner growth in basic skill areas.
   - number of hours on task.

3. Impact of OJT

   ● We will use supervisory appraisal data and performance-based checklist data to assess competency gains.

Productivity and Performance Measures

- We will analyze the following data:
  - Attendance Rates
  - Number of accidents
  - Overall performance ratings
  - Supervisory Survey results
  - Employee Self Appraisal Survey results
  - All Employee Plant Survey results
  - Process Improvement Team Performance

- We will look at:
  - Changes over time in attendance rates,
    number of accidents, and overall performance
    ratings between Oxford and Avery
    and between S.K.I.L.L. participants
    and non-participants

  - Changes over time in survey responses of
    S.K.I.L.L. participants and non-participants

  - The relationships between
    process improvement team participation
    and performance and S.K.I.L.L. participation

SMG "Cost Driver" Data

We will explore the relationships between participation in the S.K.I.L.L. program and changes over time in:

- waste
- down time
- run rate
- standard deviation of filler %
- standard deviation of finished bundle weights

Using Avery as the control group, we will compare "cost driver" data over time between Oxford and Avery.

All Oxford "cost driver" data will be related to crew performance, specifically concentrating on operator error as a key variable.

Our goal is to link high performing crews with participation in the S.K.I.L.L. program.

S.K.I.L.L. Program Evaluation
Current Status

- Research hypotheses have been formulated.

- Appropriate statistical tools are being selected.

- Data is being collected and entered into appropriate databases.

- Too early to show impact on "cost drivers."

- Computer management systems show individual growth.

- Results of December 1991 Employee Survey show S.K.I.L.L. Program viewed as extremely positive by over 90% of those responding.

- Anecdotal data from supervisors seems to indicate a relationship between participation in S.K.I.L.L. and positive changes in work behavior.

S.K.I.L.L. Program Participation
Hours Per Week
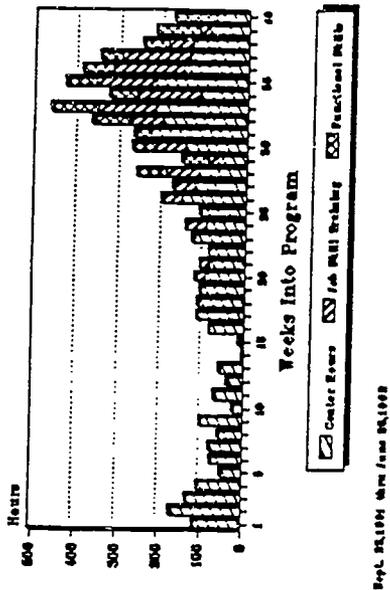
S.K.I.L.L. Program Participation
By Department
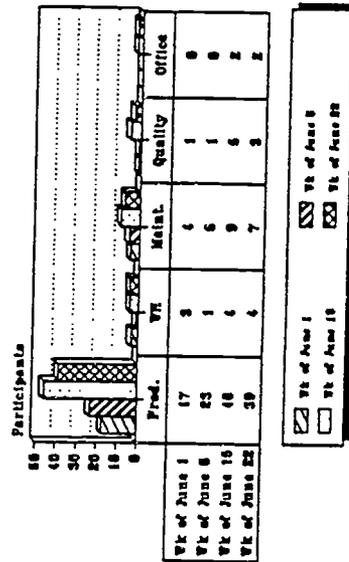
S.K.I.L.L. Program Participation
Individuals

EXTREMELY CONFIDENTIAL

Dear CertainTeed Employee:

The S.K.I.L.L. Program become operational on September 23, 1991. As of March 31, 1992, the S.K.I.L.L. Program has been in operation for approximately six months. As you know, we will be evaluating the impact of the S.K.I.L.L. Program. This survey is part of that evaluation. You will be asked to complete the same survey in October of 1992, and in March of 1993.

All CertainTeed workers are being asked to participate in the survey. Individual answers to the questions will be kept confidential. Fred Frederick, the S.K.I.L.L. Program evaluator, is the only person that will see individual answers. CertainTeed management will not see any individual answers. A summary of all of the answers will be provided to CertainTeed management, but management will not know how a particular individual answered the questions.

Please complete the survey and answer all questions honestly. Your participation in this survey is critical to our evaluation effort.

Thank you very much for your help and cooperation in this matter. ·

Fred Frederick
Program Evaluator

Survey of S.K.I.L.L. Participants
CertainTeed S.K.I.L.L. Program
April 2, 1992

_____   _____

Job Title   Date

Crew_____

Skill Program Participant   Yes_____   No_____

Your participation in this survey is critical to the S.K.I.L.L. Program evaluation.

Please Check one answer to each question. Try very hard to be open and honest when answering the questions. Remember, this data will be kept confidential. The only person that will see individual data is Fred Frederick, the S.K.I.L.L. Program evaluator. A summary of the results of this survey will be presented to CertainTeed management.

1. I understand the plant goals and work to meet them.

    never____   seldom____   sometime____   most of the time____   always____

2. I find ways to solve problems.

    never____   seldom____   sometime____   most of the time____   always____

3. I attend to all the important details when doing a job.

    never____   seldom____   sometime____   most of the time____   always____

4. I get things done well and on time.

    never____   seldom____   sometime____   most of the time____   always____

5. I often speak out and add to discussions.

    never____   seldom____   sometime____   most of the time____   always____

6. I contribute ideas which are practical as well as technically sound.

    never____   seldom____   sometime____   most of the time____   always____

1

7. I am very much concerned about the quality of my work.

   never____   seldom____   sometime____   most of the time____   always____

8. I attend to the job at hand and keep at it.

   never____   seldom____   sometime____   most of the time____   always____

9. I know how to get things done or figure out how to do them.

   never____   seldom____   sometime____   most of the time____   always____

10. I try hard to get things right the first time.

    never____   seldom____   sometime____   most of the time____   always____

11. I can be counted on to hold up my end of the job.

    never____   seldom____   sometime____   most of the time____   always____

12. I work independently.

    never____   seldom____   sometime____   most of the time____   always____

13. I work well without close supervision.

    never____   seldom____   sometime____   most of the time____   always____

14. I can read and understand job-related reading material.

    never____   seldom____   sometime____   most of the time____   always____

15. I know the technical parts of my work well.

    never____   seldom____   sometime____   most of the time____   always____

16. I am helpful and lend a hand to help other people in my Crew and other Crews.

    never____   seldom____   sometime____   most of the time____   always____

17. I am open to blunt and direct feedback.

   never____   seldom____   sometime____   most of the time____   always____

18. I profit from blunt and direct feedback.

   never____   seldom____   sometime____   most of the time____   always____

19. I readily accept suggestions from other people.

   never____   seldom____   sometime____   most of the time____   always____

20. I put suggestions to good use.

   never____   seldom____   sometime____   most of the time____   always____

21. I handle problems easily.

   never____   seldom____   sometime____   most of the time____   always____

22. I do not hesitate to say so if I think something is wrong.

   never____   seldom____   sometime____   most of the time____   always____

23. I seldom wander off the track.

   never____   seldom____   sometime____   most of the time____   always____

24. I can do all of the math required for my job.

   never____   seldom____   sometime____   most of the time____   always____

25. I know how to calculate the average (mean) of a set of numbers.

   never____   seldom____   sometime____   most of the time____   always____

26. I know how to calculate the range of a set of numbers.

   never____   seldom____   sometime____   most of the time____   always____

3

27. I can use a tape measure to accurately measure an object to within 1/16th of an inch.

    never____   seldom____   sometime____   most of the time____   always____

28. I can read and understand all Job Safety Analyses that apply to my job.

    never____   seldom____   sometime____   most of the time____   always____

29. I am an eager and motivated worker.

    never____   seldom____   sometime____   most of the time____   always____

30. I volunteer for assignments that are harder and more interesting.

    never____   seldom____   sometime____   most of the time____   always____

31. I create ways to check my own work and other's work.

    never____   seldom____   sometime____   most of the time____   always____

32. I change workplace materials or procedures on my job that are confusing or don't work well.

    never____   seldom____   sometime____   most of the time____   always____

33. I volunteer to write reports.

    never____   seldom____   sometime____   most of the time____   always____

34. I volunteer to speak or give reports at group meetings.

    never____   seldom____   sometime____   most of the time____   always____

35. I identify problems in quality of the product.

    never____   seldom____   sometime____   most of the time____   always____

36. i actively seek solutions to problems with the quality of the product.

    never____   seldom____   sometime____   most of the time____   always____

54

37. I identify problems in the production process.

   never____   seldom____   sometime____   most of the time____   always____

38. I actively seek solutions to problems in the production process.

   never____   seldom____   sometime____   most of the time____   always____

39. I understand the terms used in the roofing business.

   never____   seldom____   sometime____   most of the time____   always____

40. I give my ideas at meetings.

   never____   seldom____   sometime____   most of the time____   always____

41. I write in the log book.

   never____   seldom____   sometime____   most of the time____   always____

42. I attend my process improvement team meetings.

   never____   seldom____   sometime____   most of the time____   always____

43. I see the importance of learning new things.

   never____   seldom____   sometime____   most of the time____   always____

44. I feel comfortable learning new things.

   never____   seldom____   sometime____   most of the time____   always____

45. I break up difficult or complicated tasks or problems into smaller parts that are easier to handle.

   never____   seldom____   sometime____   most of the time____   always____

46. I ask questions to get information to help me understand a task or problem.

   never____   seldom____   sometime____   most of the time____   always____

47. I catch and correct my own errors.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

48. I schedule time to meet deadlines.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

49. I am able to use new information or knowledge in my job.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

50. I listen closely when my supervisor explains something to me.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

51. I understand the meaning of new information given to me as well as the explanation.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

52. I keep asking "How?" and "Why?" questions until I understand.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

53. I like to enter into discussions in training programs or in other group meetings such as process improvement team meetings.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

54. I can explain tasks and methods to others in my Crew.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

55. I understand the pros and cons of a suggestion or idea.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

56. I express questions in a clear manner.

　　　never____　　seldom____　　sometime____　　most of the time____　　always____

57. I organize time well.

   never_____   seldom_____   sometime_____   most of the time_____   always_____

58. I ask relevant questions that show my active involvement in discussions.

   never_____   seldom_____   sometime_____   most of the time_____   always_____

59. I connect new ideas to old ideas in trying to figure out tasks and problems.

   never_____   seldom_____   sometime_____   most of the time_____   always_____

60. If you are a S.K.I.L.L. Program participant, what can you do now that you couldn't do before you started participating in the program?

   _____
   _____
   _____
   _____

61. If you could change anything about the S.K.I.L.L. Program, what changes would you make?

   _____
   _____
   _____
   _____

62. If you are participating in the S.K.I.L.L. Program, briefly describe why you are participating and what you expect to gain by your participation.

   _____
   _____
   _____
   _____

63. If you are not participating in the S.K.I.L.L. Program, briefly describe why you are not participating.

   _____
   _____
   _____
   _____

THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY AND HELPING US TO EVALUATE THE S.K.I.L.L. PROGRAM. PUT THE COMPLETED SURVEY INTO THE ENVELOPE PROVIDED AND RETURN TO FRED FREDERICK.

S.K.I.L.L. Program Survey
Supervisor Rating Survey
CertainTeed S.K.I.L.L. Program
April 2, 1992

EXTREMELY CONFIDENTIAL

Dear CertainTeed Supervisor:

The S.K.I.L.L. Program become operational on September 23, 1991. As of March 31, 1992, the S.K.I.L.L. Program has been in operation for approximately six months. As you know, we will be evaluating the impact of the S.K.I.L.L. Program. This survey is part of that evaluation. You will be asked to complete the same survey in October of 1992, and in March of 1993.

Please complete this survey for all of your employees. Individual answers to the questions will be kept confidential. Fred Frederick, the S.K.I.L.L. Program evaluator, is the only person that will see individual answers. CertainTeed management will not see any individual answers. A summary of all of the answers will be provided to CertainTeed management, but management will not know how you rated a particular individual.

Please complete the survey and answer all questions honestly. Your participation in this survey is critical to our evaluation effort.

Enclose all of the completed surveys in the large envelope provided and return to Fred Frederick as soon as possible.

Thank you very much for your help and cooperation in this matter.

Fred Frederick
Program Evaluator

S.K.I.L.L. Program Survey
Supervisor Rating Survey
CertainTeed S.K.I.L.L. Program
April 2, 1992

EXTREMELY CONFIDENTIAL

_____   _____
Job Title of Employee   Date

_____
Supervisor's Signature   Crew_____

Skill Program Participant   Yes_____   No_____

Your participation in this survey is critical to the S.K.I.L.L. Program evaluation.

Please Check one answer to each question. Try very hard to be open and honest when answering the questions. Remember, this data will be kept confidential. The only person that will see individual data is Fred Frederick, the S.K.I.L.L. Program evaluator. A summary of the results of this survey will be presented to CertainTeed management.

This employee:

1.   Understands the plant goals and works to meet them.

      never____   seldom____   sometime____   most of the time____   always____

2.   Finds ways to solve problems.

      never____   seldom____   sometime____   most of the time____   always____

3.   Attends to all the important details when doing a job.

      never____   seldom____   sometime____   most of the time____   always____

4.   Gets things done well and on time.

      never____   seldom____   sometime____   most of the time____   always____

5.   Often speaks out and adds to discussions.

      never____   seldom____   sometime____   most of the time____   always____

6. Contributes ideas which are practical as well as technically sound.

    never____   seldom____   sometime____   most of the time____   always____

7. Is very much concerned about the quality of his/her work.

    never____   seldom____   sometime____   most of the time____   always____

8. Attends to the job at hand and keeps at it.

    never____   seldom____   sometime____   most of the time____   always____

9. Knows how to get things done or figures out how to do them.

    never____   seldom____   sometime____   most of the time____   always____

10. Trys hard to get things right the first time.

    never____   seldom____   sometime____   most of the·time____   always____

11. Can be counted on to hold up his/her end of the job.

    never____   seldom____   sometime____   most of the time____   always____

12. Works independently.

    never____   seldom____   sometime____   most of the time____   always____

13. Works well without close supervision.

    never____   seldom____   sometime____   most of the time____   always____

14. Can read and understand job-related reading material.

    never____   seldom____   sometime____   most of the time____   always____

15. Knows the technical parts of his/her work well.

    never____   seldom____   sometime____   most of the time____   always____

16. Is helpful and lends a hand to help other people in his/her Crew and other Crews.

   never____   seldom____   sometime____   most of the time____   always____

17. Is open to blunt and direct feedback.

   never____   seldom____   sometime____   most of the time____   always____

18. Profits from blunt and direct feedback.

   never____   seldom____   sometime____   most of the time____   always____

19. Readily accepts suggestions from other people.

   never____   seldom____   sometime____   most of the time____   always____

20. Puts suggestions to good use.

   never____   seldom____   sometime____   most of the time____   always____

21. Handles problems easily.

   never____   seldom____   sometime____   most of the time____   always____

22. Does not hesitate to say so if he/she thinks something is wrong.

   never____   seldom____   sometime____   most of the time____   always____

23. Seldom wanders off the track.

   never____   seldom____   sometime____   most of the time____   always____

24. Can do all of the math required for his/her job.

   never____   seldom____   sometime____   most of the time____   always____

25. Knows how to calculate the average (mean) of a set of numbers.

   never____   seldom____   sometime____   most of the time____   always____

26. Knows how to calculate the range of a set of numbers.

   never____   seldom____   sometime____   most of the time____   always____

27. Can use a tape measure to accurately measure an object to within 1/16th of an inch.

   never____   seldom____   sometime____   most of the time____   always____

28. Can read and understand all Job Safety Analyses that apply to his/her job.

   never____   seldom____   sometime____   most of the time____   always____

29. Is an eager and motivated worker.

   never____   seldom____   sometime____   most of the time____   always____

30. Volunteers for assignments that are harder and more interesting.

   never____   seldom____   sometime____   most of the time____   always____

31. Creates ways to check his/her work and other's work.

   never____   seldom____   sometime____   most of the time____   always____

32. Changes workplace materials or procedures on his/her job that are confusing or don't work well.

   never____   seldom____   sometime____   most of the time____   always____

33. Volunteers to write reports.

   never____   seldom____   sometime____   most of the time____   always____

34. Volunteers to speak or give reports at group meetings.

   never____   seldom____   sometime____   most of the time____   always____

35. Identifies problems in quality of the product.

   never____   seldom____   sometime____   most of the time____   always____

36. Actively seeks solutions to problems with the quality of the product.

   never____   seldom____   sometime____   most of the time____   always____

37. Identifies problems in the production process.

   never____   seldom____   sometime____   most of the time____   always____

38. Actively seeks solutions to problems in the production process.

   never____   seldom____   sometime____   most of the time____   always____

39. Understands the terms used in the roofing business.

   never____   seldom____   sometime____   most of the time____   always____

40. Gives his/her ideas at meetings.

   never____   seldom____   sometime____   most of the time____   always____

41. Writes in the log book.

   never____   seldom____   sometime____   most of the time____   always____

42. Attends process improvement team meetings.

   never____   seldom____   sometime____   most of the time____   always____

43. Sees the importance of learning new things.

   never____   seldom____   sometime____   most of the time____   always____

44. Feels comfortable learning new things.

   never____   seldom____   sometime____   most of the time____   always____

45. Breaks up difficult or complicated tasks or problems into smaller parts that are easier to handle.

   never____   seldom____   sometime____   most of the time____   always____

46. Asks questions to get information to help understand a task or problem.

   never____   seldom____   sometime____   most of the time____   always____

47. Catches and corrects his/her own errors.

   never____   seldom____   sometime____   most of the time____   always____

48. Schedules time to meet deadlines.

   never____   seldom____   sometime____   most of the time____   always____

49. Is able to use new information or knowledge in his/her job.

   never____   seldom____   sometime____   most of the time____   always____

50. Listens closely when his/her supervisor explains something.

   never____   seldom____   sometime____   most of the time____   always____

51. Understands the meaning of new information given to him/her as well as the explanation.

   never____   seldom____   sometime____   most of the time____   always____

52. Keeps asking "How?" and "Why?" questions until he/she understands.

   never____   seldom____   sometime____   most of the time____   always____

53. Likes to enter into discussions in training programs or in other group meetings such as process improvement team meetings.

   never____   seldom____   sometime____   most of the time____   always____

54. Can explain tasks and methods to others in his/her Crew.

   never____   seldom____   sometime____   most of the time____   always____

55. Understands the pros and cons of a suggestion or idea.

   never____   seldom____   sometime____   most of the time____   always____

56. Expresses questions in a clear manner.

   never____   seldom____   sometime____   most of the time____   always____

57. Organizes time well.

   never____   seldom____   sometime____   most of the time____   always____

58. Asks relevant questions that show active involvement in discussions.

   never____   seldom____   sometime____   most of the time____   always____

59. Connects new ideas to old ideas in trying to figure out tasks and problems.

   never____   seldom____   sometime____   most of the time____   always____

60. If you could change anything about the S.K.I.L.L. Program, what changes would you make?

   _____
   _____
   _____
   _____

61. If you are participating in the S.K.I.L.L. Program, briefly describe why you are participating and what you expect to gain by your participation.

   _____
   _____
   _____
   _____

62. If you are not participating in the S.K.I.L.L. Program, briefly describe why you are not participating.

   _____
   _____
   _____
   _____