
Lane Community Coll., Eugene, Oreg.

88

GO08642193

93p.; For Phase I reports, see CE 064 470, for Phase III reports, see CE 064 472 and ED 330 893.

Reports - Evaluative/Feasibility (142)

MF01/PC04 Plus Postage.

*Apprenticeships; Behavioral Objectives; *Clearinghouses; Field Tests; Information Dissemination; *Instructional Materials; Objectives; *Program Development; *Program Effectiveness; *Vocational Education

*Related Subjects Instruction

These four evaluation updates cover the second phase of the apprenticeship training materials clearinghouse project, which is being conducted at Lane Community College in Eugene, Oregon. The first update evaluates project activities related to field-testing the clearinghouse services, analyzing the field test results, and developing mailing lists of potential users. Additional information on activities related to field-testing the clearinghouse is presented in the second and third updates along with information on developing an information package for dissemination and developing a membership base for clearinghouse utilization. The fourth update evaluates later activities related to field-testing clearinghouse services test, revising the clearinghouse model based on evaluations from the field test sites, and developing an information package and membership base. Included among the materials appended to the individual updates are the following: task inventory listings and recommended instructional modules for machine repairers and patternmakers, module listing for painter apprentices, copies of related newspaper articles, project-related correspondence, user evaluation form, a vendor solicitation postcard and referral letter, National Clearinghouse for Apprenticeship Related Training Materials brochures, phase 3 proposal, report on apprenticeship in Oregon, and continuation proposal. (MN)
A Model System for the Design and Maintenance of Related Instruction Curriculum for Approved U.S. Department of Labor Apprenticeship Occupations

Phase II

Lane Community College
Eugene, Oregon
Grantee Organization: Lane Community College  
4000 East 30th Avenue  
Eugene, OR 97405

Grant No.: G008642193

Project Dates:  
Starting Date: October 1, 1986  
Ending Date: September 30, 1989

Project Director: Carl Horstrup  
Apprenticeship Coordinator  
Lane Community College  
4000 East 30th Avenue  
Eugene, OR 97405  
Telephone: (503) 747-4501, ext. 2843

FIPSE Program Officer:
This project established a national clearinghouse for apprenticeship related instructional materials. This project searched out quality training materials from all states and Canadian provinces. During this search process, an assessment of apprenticeship curriculum needs was made and curriculum gaps defined. A directory was produced and distributed to all 10 USDL BAT Regional and 50 State Offices and to several states' vocational curriculum centers. Continual progress reports were printed in the monthly national newsletter, USAA (United States Apprenticeship Association) Sentinel, which has membership in every state and U.S. territory. A computerized data base system was developed allowing additions and revisions as various sources become available for inclusion.

Carl Horstrup
Apprenticeship Coordinator
Lane Community College
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"A MODEL SYSTEM FOR THE DESIGN AND MAINTENANCE OF RELATED INSTRUCTION CURRICULA FOR APPROVED U.S. DEPARTMENT OF LABOR APPRENTICESHIP PROGRAMS"
A MODEL SYSTEM FOR THE DESIGN AND MAINTENANCE OF
RELATED INSTRUCTION CURRICULUM FOR APPROVED
U. S. DEPARTMENT OF LABOR APPRENTICESHIP
OCCUPATIONS

CARL HORSTRUP, PROJECT DIRECTOR
LANE COMMUNITY COLLEGE
4000 EAST 30TH STREET
EUGENE, OREGON 97405

Submitted by
E. WAYNE COURTNEY, THIRD PARTY EVALUATOR
3220 N. W. ARROWOOD CIRCLE
CORVALLIS, OREGON 97330
(503) 758-7325

JANUARY 20, 1988
INTRODUCTION

This report summarizes the activities for Phase II of the project to the present time. Whereas the initial phase of the three-year program included the development of the model, collection, of relevant apprenticeship-related curriculum materials, and site testing of the Directory, the second phase mainly concerns itself with field and site implementation. The field testing and evaluation of the Directory were completed in late October and the results were reported in the November 24, 1987 update.

Since the last report, hardware needs for the project have been met through the acquisition of an AST Premium 286 computer, an Okidata laser printer, and a Leading Edge monitor. This hardware will adequately manage the BRS software in terms of future needs for the project. The curriculum materials for the project will be available on the nationwide ACCESS network.

The third party evaluator’s role during Phase II is to assist the Project Director in assessing the practical problems associated with implementing the materials usage in the field. The present report extends the results of Phase I and reflects upon benchmark questions which constitute necessary steps for the field evaluation. Attached as Appendix items in this report are task inventory checklists for machine repairer and patternmaker, along with recommended curriculum modules for painters. Contractors representing the Gliddon Paint Company are the respondents for the painter task inventory; task analyses for patternmaker and machine repairer are being completed by samples of respondents in Wisconsin. These materials have not been submitted in previous evaluation reports.
PHASE II OBJECTIVES

Phase II is the field testing sequence for the project and includes the evaluation of all products and processes for accessing the curriculum materials which were developed during Phase I. The following objectives are subsumed in as Phase II activities. Evaluation progress remarks are shown below each of three selected Phase II major objective statements.

Objective 4.3 Conduct field test on clearinghouse services

A total of eight (8) test sites have been selected for the field evaluations. These include locations in Tennessee, North Dakota, Wisconsin, Nevada, Hawaii, British Columbia, Florida, and Oregon. Each of these stations has been contacted with regard to their participation in the project and have agreed to cooperate with the Project Director in the field testing. Evaluation results will be collected from each of the participating agencies during a later date as specified in the Phase II timetable.

Objective 4.4 Analyze results from field test.

This objective cannot be completed until the field test results are returned to the Project Director. After these data are analyzed and summarized, recommendations will be made for revising and refining the model.

Objective 5.1 Develop mailing lists of potential users.

Contacting potential users of clearinghouse services is an ongoing activity of the project staff. Project personnel have been very effective in reaching interested parties at conferences and professional meetings, as well as through personal contacts and correspondences. This continues in the form of advertising in the December 7, 1987 issue of the USAA Sentinel, the ITC Update, and numerous workshop meetings. The Project Director is scheduled with the Bricklayer Workshop people in Tallahassee, Florida during the week of January 18-22, 1988, and with Apprenticeship Field Representatives from Oregon on February 25, 1988. The staff will confer with Buddy Kalares, National Director FIPSE, on February 16th. The American Association of Community and Junior Colleges (AAFCC) has agreed to work closely with the project as a principal user group.
APPENDIX

Task Inventory Listing - Machine Repairer
Task Inventory Listing - Patternmaker
Module Listing for Painter Apprentices
USAA Sentinel Copy (December 7, 1987)
ITC Update Copy (November, 1987)
MACHINE REPAIRER

TASK INVENTORY

Listed below are the duties and tasks that are commonly performed in the occupation of machine repairer. Please check those tasks that are needed in the performance of your job. Add any tasks which may be missing from this inventory. Blank spaces are provided for write-ins.

<table>
<thead>
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<th>Check</th>
<th>Comments</th>
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A. REPAIR ELECTRICAL SYSTEMS

1. Measure current.

2. Measure voltage.

3. Measure resistance.


5. Construct parallel circuits.

6. Use Ohm's Law to calculate voltage, current and resistance.

7. Compute impedance and reactance of circuits.

8. Read schematics and circuit diagrams.

9. Use a voltmeter.

10. Use an ammeter.

11. Use an Ohmmeter.
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<tbody>
<tr>
<td>12.</td>
<td>Use a multimeter.</td>
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<td>13.</td>
<td>Use an oscilloscope.</td>
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<td>15.</td>
<td>Interpret troubleshooting charts.</td>
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<td>16.</td>
<td>Interpret chipswapping charts.</td>
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<td>17.</td>
<td>Install motherboard.</td>
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<td>18.</td>
<td>Install main logic assembly.</td>
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<td>19.</td>
<td>Install peripheral equipment.</td>
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<td>20.</td>
<td>Install printed circuit boards.</td>
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<tr>
<td>22.</td>
<td>Solder circuits.</td>
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<td>23.</td>
<td>Desolder circuits.</td>
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<tr>
<td>24.</td>
<td>Use heavy solder techniques.</td>
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<tr>
<td>25.</td>
<td>Use troubleshooting techniques to isolate electrical problems.</td>
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<tr>
<td>26.</td>
<td>Repair various types of circuitry and devices.</td>
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<tr>
<td>a.</td>
<td>Video monitor circuits</td>
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<td>b.</td>
<td>Vertical circuits</td>
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<td>Check</td>
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<tr>
<td>c.</td>
<td>Horizontal circuits</td>
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<td>d.</td>
<td>High voltage circuits</td>
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<td>e.</td>
<td>Video games</td>
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<td>f.</td>
<td>Decoders</td>
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<td>g.</td>
<td>Multiplexers</td>
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<td>h.</td>
<td>Basic logic gates</td>
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<td>i.</td>
<td>Opto-electronic devices</td>
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<td>j.</td>
<td>Memory devices</td>
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<td>k.</td>
<td>Anti-cheat devices</td>
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<td>l.</td>
<td>Peripheal test stations</td>
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<td>m.</td>
<td>Tilt coders</td>
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<td>n.</td>
<td>AC circuits</td>
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<td>o.</td>
<td>DC circuits</td>
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<td>p.</td>
<td>Digital circuits</td>
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<tr>
<td>q.</td>
<td>Analog circuits</td>
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<td>27.</td>
<td>Identify wires by size and color code.</td>
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<td>28.</td>
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B. REPAIR MECHANICAL SYSTEMS

1. Remove and replace seals.

2. Identify shaft arrangements.

3. Identify operational features of shafts and seals.

4. Remove, examine and install bearings.

5. Remove/replace/align/check tolerances of couplings and clutches.

6. Assemble gear patterns from diagrams.

7. Identify speed reducers and multipliers.

8. Inspect/adjust gears.

9. Select/install belts and chains.
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<tbody>
<tr>
<td>10.</td>
<td>Remove/replace pulleys and sprockets.</td>
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<td>11.</td>
<td>Measure required tolerances.</td>
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<tr>
<td>12.</td>
<td>Use solvents for cleaning.</td>
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<td>13.</td>
<td>Disassemble/reassemble mechanical equipment.</td>
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<td>14.</td>
<td>Use soldering and welding equipment.</td>
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<td>15.</td>
<td>Use machine tools.</td>
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<td>16.</td>
<td>Use hand tools.</td>
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<tr>
<td>17.</td>
<td>Use power tools.</td>
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<td>18.</td>
<td>Use micrometer for measuring parts.</td>
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<td>20.</td>
<td>Inspect/repair cams.</td>
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</table>
C. REPAIR FLUID POWER SYSTEMS.

1. Identify hydraulic and pneumatic systems.

2. Explain basic application of fluid power laws.

3. Use fluid power laws in testing, repairing and maintaining fluid system components.

4. Service fluid power, filters and seals.

5. Dissamble/assemble filters.

6. Conduct flow tests on filters.

7. Make viscosimeter check.

8. Identify switching and sensing circuits.


10. Identify fluid power symbols on charts, manuals and diagrams.

11. Make fluid power hook-ups.

12.

13.

14.

15.
D. COMMUNICATE ABOUT EQUIPMENT REPAIR.

1. Record inspection data.

2. Write legibly.


4. Keep time reports.

5. Prepare requisitions.

6. Prepare work orders.

7. Read specification manuals.

8. Read blueprints, drawings, charts and diagrams.

9. Sketch ideas and mechanical concepts.

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</table>
Listed below are the duties and tasks that are commonly performed in the occupation of patternmaker. Please check those tasks that are needed in the performance of your job. Add any tasks which may be missing from this inventory. Blank spaces are provided for write-ins.

<table>
<thead>
<tr>
<th>A. READ AND INTERPRET BLUEPRINTS, DRAWINGS AND JOB SPECIFICATIONS.</th>
<th>Check</th>
<th>Comments</th>
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<tbody>
<tr>
<td>1. Blueprints</td>
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<tr>
<td>2. Orthographic drawings</td>
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<td>3. Isometric drawings</td>
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<td>4. Oblique drawings</td>
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<td>5. Perspective drawings</td>
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<td>6. Sketches</td>
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<td>7. Metric dimensioned drawings</td>
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<td>8. Job specifications</td>
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<td>10.</td>
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</table>
**B. MEASURE, MARK AND LAYOUT WOOD UNITS.**

<table>
<thead>
<tr>
<th></th>
<th>Check</th>
<th>Comments</th>
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<tbody>
<tr>
<td>1. Measure</td>
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<tr>
<td>a. Pull-out tape</td>
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<tr>
<td>b. Rafter square</td>
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<td>c. Tri-square</td>
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<td></td>
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<tr>
<td>d. Combination square</td>
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<tr>
<td>e. Folding rule</td>
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<tr>
<td>2. Mark</td>
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<tr>
<td>a. Scriber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Divider and trommel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Pencil</td>
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<td>3. Layout materials to be cut</td>
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<td>8.</td>
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</table>
C. SELECT AND USE MATERIALS, TOOLS AND EQUIPMENT TO PERFORM A JOB.

<table>
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<tr>
<th></th>
<th>Check</th>
<th>Comments</th>
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<tbody>
<tr>
<td>1.</td>
<td>Adhesives and glue, cement, epoxy</td>
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<tr>
<td>2.</td>
<td>Caulking materials</td>
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<tr>
<td>3.</td>
<td>Fasteners: nails, screws, bolts, staples</td>
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<tr>
<td>4.</td>
<td>Hardware: hinges, catches, locks</td>
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<td>5.</td>
<td>Lumber, dimension</td>
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<tr>
<td>6.</td>
<td>Lumber, finish</td>
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<tr>
<td>7.</td>
<td>Plywood</td>
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<td>8.</td>
<td>Plastics: wire, cloth, screen, sheet, tubing</td>
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<tr>
<td>9.</td>
<td>Waterproofing materials</td>
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<td>10.</td>
<td>Boring tools: hand drills, reamers</td>
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<td>11.</td>
<td>Drilling tools: portable, stationary</td>
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<tr>
<td>12.</td>
<td>Fastening tools: hammers, wrenches, pliers</td>
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<tr>
<td>13.</td>
<td>Holding tools: clamps, vise</td>
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<tr>
<td>14.</td>
<td>Painting and finishing tools</td>
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<tr>
<td>15.</td>
<td>Power actuated tools</td>
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</tbody>
</table>
16. **Prying tools:** nail puller, wrecking bar

17. **Riveting equipment**

18. **Router**

19. **Sanders**

20. **Saws:** band, circular, jig, scroll, skill, radial arm, saber

21. **Scraping tools:** hand and power

22. **Sharp-edge cutting tools:** chisels, countersink

23. **Tooth cutting tools:** saws, files, rasps

24. **Tool sharpening equipment:** files, oil stones.

25.

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31.
### D. CUT AND FIT MATERIALS

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<tbody>
<tr>
<td>1.</td>
<td>Wood</td>
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<td>2.</td>
<td>Plastic</td>
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<td>3.</td>
<td>Metal</td>
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### E. FASTEN MATERIALS

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<tbody>
<tr>
<td>1.</td>
<td>Nails</td>
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<td>2.</td>
<td>Bolts</td>
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<td>3.</td>
<td>Screws</td>
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<td>4.</td>
<td>Adhesives</td>
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### F. FINISH MATERIALS

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<td>1.</td>
<td>Sand</td>
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<td>2.</td>
<td>Patch cracks</td>
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<td>3.</td>
<td>Sandblast</td>
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<td>Paint</td>
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### G. CALCULATE

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<td>Fractions</td>
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<td>Decimals</td>
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<td>3.</td>
<td>Conversion of fractions to decimals</td>
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<td>4.</td>
<td>Ratio and proportion</td>
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<td>5.</td>
<td>Percentages</td>
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<td>6.</td>
<td>Metric conversions</td>
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<td>7.</td>
<td>Area of rectangles</td>
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<td>Check</td>
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<td>8.</td>
<td>Area of triangles</td>
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<td>9.</td>
<td>Area of circles</td>
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<td>10.</td>
<td>Volume</td>
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<td>Board feet</td>
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<tr>
<td>H.</td>
<td>PERFORM RELATED TASKS</td>
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<tr>
<td>1.</td>
<td>Operate computer terminal</td>
</tr>
<tr>
<td>2.</td>
<td>Read handbook, catalog and manuals</td>
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<tr>
<td>3.</td>
<td>Read service orders</td>
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<td>4.</td>
<td>Estimate amounts and costs of materials</td>
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<td>5.</td>
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<td>6.</td>
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<td>7.</td>
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<td>8.</td>
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</tbody>
</table>
### I. DEMONSTRATE PERSONAL QUALITIES

<table>
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<th></th>
<th>Check</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Get to work on time</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Follow orders</td>
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</tr>
<tr>
<td>3.</td>
<td>Respect property and authority</td>
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<tr>
<td>4.</td>
<td>Show safe-working attitude</td>
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<td>5.</td>
<td>Get along with others</td>
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<td>6.</td>
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<td>7.</td>
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<td>9.</td>
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<td>10.</td>
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</tbody>
</table>
The following titles of modules are recommended for those involved in development of apprenticeship related training curriculum for painters. This is intended to serve as a framework for organizing curriculum content. A task inventory was completed in the painter trades and utilized in synthesizing this list.

The following 28 titles are recommended as basic modules. Others can be added as needed by the specific training program.

A. SAFETY
   1. Ladder and scaffold safety
   2. Protective clothing and equipment
   3. Dust, fumes and gases safety
   4. Hand tool safety
   5. Power tool safety

B. EQUIPMENT
   1. Air compressor
   2. Spray guns
   3. Airless compressor
   4. Types of brushes
   5. Roller application equipment

C. LADDERS AND SCAFFOLDING
   1. Types of ladders
   2. Selection and use of ladders
   3. Tubular scaffolding

D. PAINTS AND FINISHES
   1. Reading and interpreting paint specifications and labels
   2. Exterior paints
   3. Interior paints
   4. Tinting and mixing paints
   5. Primers
   6. Stains
   7. Transparent finishes

E. SURFACE PREPARATION
   1. Patching and filling cracks and voids
   2. Cleaning surfaces for painting
   3. Sanding surfaces to be painted

F. APPLICATION OF PAINTS AND FINISHES
   1. Brush painting techniques
   2. Spray painting techniques
   3. Roller painting techniques
   4. Masking techniques
   5. Cleaning paint equipment
Roger Semerad, Assistant Secretary of Labor for Employment and Training, will leave his post December 11, to become an executive with Burson-Marsteller, a large Washington, D.C., public relations firm. There is no word yet on who the White House will nominate to succeed Semerad. The appointment is subject to Senate Confirmation. During Semerad's two-year tenure, Labor initiated the "Workforce 2000" report, which analyzes the nation's work force composition for the 21st Century and also the "Apprenticeship 2000" paper. Semerad is the second major departure from the DOL, as former Labor Secretary William Brock left his post November 1, to direct Sen. Robert Dole's presidential bid. Semerad said he is leaving because "an opportunity presented itself that was too good to pass up and that in the wake of Brock's leaving and with only a year left in the Reagan administration, other Labor departures are inevitable. I think many people will begin to leave."

APPRENTICESHIP INFORMATION SYSTEMS AVAILABLE

Two private firms marketing apprenticeship recordkeeping systems have come to our attention recently. We cannot vouch for either, but pass along the following information to our members who may be looking for such information.

APPRENTICE I - "A computerized Apprenticeship Recordkeeping System." "Maintains most state, federal and local required records." Needs IBM-PC, XT, AT, PS/2 is compatible with DOS 2.0 or higher. Contact Applied Technetronics, P. O. Box 146, Cygnet, Ohio 43413, 1-(419)655-2253.

THE APPRENTICESHIP TRAINING INFORMATION SYSTEM "A detailed system that tracks all aspects of apprentice programs." Contains apprentice schedules, training records, work history, company information, pay schedules and more. Needs IBM compatible, 512 Ram, 360 Disc Drive and a hand disc. Firm will provide trainer to set up and install. Contact Sierra Micro Applications, 8125 Sunset Avenue, Suite 101, Fair Oaks, CA 95628, (916)722-5018.

D.C. CHANGES COUNCIL HEAD

Frances Graham has been appointed Director of the Washington, D.C. Apprenticeship Council. Ms. Graham replaces Elizabeth Sarpy who left the post recently. Ms. Graham can be reached at 500 C Street, N.W., Suite 241, Washington, DC 20001, (202)639-1415.

NATIONAL RELATED INSTRUCTION CLEARINGHOUSE ON SCHEDULE

Carl Horstrup, Director of the National Clearinghouse for Related Instruction Project reported to USAA in November, that the project was "on schedule." We reviewed the "pilot" catalog set for the printer and were impressed. "Comprehensive, easy to use, and easily updated" are the words that best describe this needed catalog. The project office is open during normal hours and if you need information on the whereabouts of apprentice related curriculum contact: Carl Horstrup, Department Head, Apprenticeship Programs, Industrial Technology Programs, Lane Community College, 4000 East 30th Avenue, Eugene, Oregon 97405, (503)747-4501, Ext. 2843.
Jim McGlauflin, Training Manager for the State of Georgia's Quick Start Program, noted that "Companies today are more concerned about training. They're finally realizing that if adequate training is provided at the first-line level, meaning operators and supervisors, the company can operate more efficiently."

Quick Start is an operation with a track record that spans 20 years and 1,000 training projects — resulting in more than 70,000 employees highly trained for their jobs. Its mission is to attract new industry to Georgia and help established companies successfully expand their operations. To that end, the Georgia Department of Industry and Trade and the State Board of Postsecondary Vocational Education promise to provide Georgia-based industries with a trained work force — "quality employees, when and where they're needed."

**Features:**

- Georgia's Quick Start - Results Count
- Labor/Management Training: Florida
- "Yankee Ingenuity"
- National Clearinghouse Grant: Oregon
- Activ Wins a Cindy!
- Update SOS!

**Page**

1
3
5
6
6
7
Congratulations Are In Order!

Editor's Note: Always delighted to hear from friends of ITC, I am especially pleased Carl's news arrived before we went to press. Do call if you have information to share.

Lane Community College, located in Eugene, Oregon, has been awarded a three-year grant to develop a national clearinghouse for apprentice-related instruction. The grant, totaling $293,000, will fund the establishment of an electronic database that can be accessed from across the country and will make available either related instructional materials or identify the sources of such material. Project Director, Carl Horstrup, has already sent letters out across the country urging people who have materials for sharing through the clearinghouse to provide them with information on what the materials are, their location and their availability. USSA members who would like additional information on any part of the project or who would be interested in having their material listed in the clearinghouse should contact Carl Horstrup, FIPSE Project Director, Apprenticeship Coordinator, Lane Community College, 4000 East 30th Avenue, Eugene, Oregon 97405 (503) 747-4501, Ext. 2843.

Activ
"Precision Measuring Instruments" - AVA Award

Chris Carlisle, Executive Director of the Association of Visual Communicators, recently wrote to congratulate ITC on our winning entry in the AVA Interactive Videodisc Level III category of the CINDY competition. ITC's Kim Normandin will be at the 29th annual CINDY Awards Banquet, November 21st at the Stouffer Concourse Hotel in Los Angeles, California, to accept the award. Do take time to say hello to Kim if you are attending the festivities. If not, remember you are always welcome to stop by our West Coast office in Cerritos, California 90704-2700

The Price of Errors Debated - and Most Probably Underrated

In an article focusing on how much poor product quality really cuts into U.S. corporate profits by Elisabeth Ryan Sullivan (Monday, October 12th issue, Manufacturing Week), the head of Corning Glass Works - Chairman James R. Houghton - is quoted as saying "The cost of preventing, detecting, and paying for errors is actually somewhere between 20 and 30 percent of sales for the average company now." These percentages were pitted against the finding of a National Gallup poll which revealed that 67 percent of U.S. executives think that poor quality costs them less than 10 percent of sales.

Sullivan went on to say that Houghton found it "greatly disturbing" that most executives thought their employees lacked education and training and, therefore, motivation to strive for quality. There is an upbeat ending to the article, however, insofar as Corning is concerned. Speaking of their manufacturing operations, Houghton said: "Training, alone, has helped transform manufacturing operations. Yes, it represents a large investment, but neither we nor anyone else can afford to overlook it!"

If you haven't found time to implement quality control concepts and procedures in your facility yet, take a moment to consider what it may be costing you! ITC's complete video-based Statistical Process Control training package is available for preview at your convenience. Just call 800/638-3757.
A MODEL SYSTEM FOR THE DESIGN AND MAINTENANCE OF RELATED INSTRUCTION CURRICULUM FOR APPROVED U. S. DEPARTMENT OF LABOR APPRENTICESHIP OCCUPATIONS

CARL HORSTRUP, PROJECT DIRECTOR
LANE COMMUNITY COLLEGE
4000 EAST 30TH STREET
EUGENE, OREGON 97405

SUBMITTED BY
E. WAYNE COURTNEY, THIRD PARTY EVALUATOR
3220 N. W. ARROWOOD CIRCLE
CORVALLIS, OREGON 97330
(503) 758-7325

MARCH 25, 1988
INTRODUCTION

The project continues to receive cooperation from various groups such as AACJC and other agencies (see Appendix A). This update reports on project activities which have been concluded since the previous report (January 20, 1988) and contains the current status of the evaluation measures for Phase II. The second phase has as its major thrust the field testing of the model and other aspects of materials usage.

The field evaluation of the directory continues to receive input from sites representing ten (10) states and provinces in the United States and Canada. The results of these data are presented with this report. In addition, the present evaluation includes the listings for recommended modules for machine Repairer and for patternmaker, which are residual products from Phase I (see Appendix B).

Hardware items which have been secured for the project include an AST Premium 286 computer, an Okidata laser printer, and a leading edge monitor. Software acquisitions for use with this equipment include BRS/SEARCH, which runs on Xenix System 5. This combination should adequately fill the immediate future requirements and needs for the project as subsequent phases are implemented.
PHASE II PROGRESS

Phase II of the Project includes the evaluation of products and processes which were developed during Phase I. The following progress has been made in fulfilling the Phase II goals.

Objective 4.3. Conduct field test on Clearinghouse Services.

The data which have been compiled on the evaluation of the DIRECTORY are shown below. The instrument used to gather these data is presented in Appendix C. Mean scores were calculated for each of the five (5) criteria and are based on a 4-point scale. The summary data are as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mean Score</th>
</tr>
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<tbody>
<tr>
<td>Organization of the DIRECTORY</td>
<td>3.33</td>
</tr>
<tr>
<td>Completeness of the instructions</td>
<td>3.50</td>
</tr>
<tr>
<td>Technical accuracy of the content</td>
<td>3.00 *</td>
</tr>
<tr>
<td>Clarity of the included content</td>
<td>3.33</td>
</tr>
<tr>
<td>General utility of the DIRECTORY for field use</td>
<td>3.67</td>
</tr>
</tbody>
</table>

* Note: The evaluations for technical accuracy represent 50% of the responding states. Others reported that they had not tested this criterion.

These scores range at the highest end of the evaluation scale and are considered to be a valid measure of the utility of these materials for field use.

An evaluation format for the Clearinghouse Phase II and subsequent phase activities has been developed (Appendix D). This instrument will be utilized in conjunction with data and materials dissemination to users.
Objective 5.2. Develop information package for dissemination.

A vendor use information postcard has been designed for the Project (see Appendix E). This solicitation approach will be utilized with a Clearinghouse brochure, constituting one of the primary methods for establishing a vendor mailing list for the Project. The content for the brochure has been suggested (see Appendix F). The brochure will be completed in the near future.

Objective 5.4. Develop membership base for Clearinghouse utilization.

It is anticipated that the materials and products of the Project will be available to users via modem through the ACCESS network as well as directly from Lane Community College. Both printed matter and computer (disk) access will be available.
February 4, 1988

Governor Neil Goldschmidt
State of Oregon
State Capitol
Salem, Oregon 97310

Dear Governor Goldschmidt:

In working with my community college colleagues in Oregon, they feel Oregon could take a step ahead of some other states by your establishment of an Oregon Apprenticeship/Technical Education Steering Committee. Carl Horstrup, Chair of the Industrial Technology Division at Lane Community College in Eugene, knows a good bit about this subject and could be of much help to you. I might add that we would also like to see Carl Horstrup appointed to the National Apprenticeship/Technical Education Coordinating Steering Committee (400 Maryland Avenue, S.W., Washington, D.C. 20202-5612). If you were to implement these two recommendations, Oregon's excellent community colleges could be setting a pace for the nation and Carl Horstrup would be an exceptional representative on the National Apprenticeship/Vocational Education Coordinating Steering Committee sponsored by the U.S. Departments of Labor and Education.

Carl Horstrup has a national reputation as an expert on community college/apprenticeship programs. Also, he is well-known and respected for his knowledge and achievement in implementing apprenticeship/technical education programs. We are planning to make available to our national network of 1230 colleges his comprehensive study of apprenticeship programs offered by the community colleges in this country. We will certainly appreciate any help you can give us on Carl Horstrup's appointment, and on the creation of an Oregon Apprenticeship/Technical Education Steering Committee. I would love to see my home state develop the most productive and competitive workforce in the world.

Cordially,

Dale P. Rennell
President

cc: Richard Turner, President
Lane Community College

Carl Horstrup
Lane Community College

National Center for Higher Education, One Dupont Circle N.W., Suite 410, Washington, D.C. 20036  (202)293-7050
March 1, 1988

The National Apprenticeship/Vocational Education Coordinating Steering Committee
400 Maryland Avenue, SW
Washington, D.C. 20202-5612

To the Committee:

This letter is in reply to a letter from Secretaries Bennett and Brock requesting that states establish apprenticeship and vocational education steering committees and to designate an official statewide contact person.

I would like to designate the following person to be the steering committee contact person for the State of Oregon:

Carl Horstrup, Vice Chair
State Apprentice-Related Training Advisory Committee
Department of Education
700 Pringle Parkway SE
Salem, Oregon 97310-0290
Phone: (503) 747-4501

Thank you for your assistance.

Sincerely,

Neil Goldschmidt
Governor

NG:1sw
0853w

CC: Verne Duncan, Superintendent of Education
Mary Wendy Roberts, Labor Commissioner
Carl Horstrup, Apprenticeship Department,
Lane Community College
RECOMMENDED INSTRUCTIONAL MODULES FOR MACHINE REPAIRER

The following modules are recommended for a course of study for apprenticeship related training for machine repairers. This is intended to serve as a framework for organizing curriculum content with trades people adding or deleting modules to meet their local needs. The following 29 modules are recommended as basic modules.

A. SAFETY
   1. Protective Clothing and Equipment
   2. Dust, Fumes and Gasses Safety
   3. Hand Tool Safety
   4. Power Tool Safety

B. TOOLS AND EQUIPMENT
   1. Use of Hand Tools
   2. Use of Power Tools
   3. Use of Machine Tools
   4. Use of Soldering and Welding Equipment

C. MEASUREMENT
   1. Use Micrometer
   2. Measure Tolerances

D. COMMUNICATIONS
   1. Blueprints, Drawings, Specifications and Manuals
   2. Written Reports, Requisitions and Inspection Records
   3. Sketching

E. MECHANICAL SYSTEMS
   1. Seals, Shafts and Bearings
   2. Gears, Speed Reducers and Speed Multipliers
   3. Belts and Chains
   4. Couplings and Clutches
   5. Pulleys and Sprochets
   6. Tripshafts, Springs and Levers
   7. Cams
   8. Cleaning Solvents
   9. Inspection, Adjustment and Repair Techniques

F. FLUID POWER SYSTEMS
   1. Hydraulic and Pneumatic Systems
   2. Filters and Seals
   3. Switching and Sensing Devices
   4. Hydraulic Pump
   5. Solenoid Valve
   6. Digital and Proportional Devices
   7. Troubleshooting Techniques
APPENDIX B

RECOMMENDED INSTRUCTIONAL MODULES FOR PATTERNMAKER

The following modules are recommended for a course of study for apprenticeship related training for patternmaker. This is intended to serve as a framework for organizing curriculum content with trades people adding or deleting modules to meet their local needs. The following 45 modules are recommended as basic modules.

A. BLUEPRINTS, DRAWINGS AND SPECIFICATIONS
   1. Blueprints
   2. Orthographic Drawings
   3. Isometric Drawings
   4. Perspective Drawings
   5. Sketching
   6. Metric Dimensioned Drawings
   7. Job Specifications
   8. Visualization of Three Dimensional Objects

B. SAFETY
   1. Hand Tools Safety
   2. Power Tool Safety
   3. Eye Safety
   4. Dusts, Fumes and Gasses Safety
   5. Fire Safety

C. TOOLS, EQUIPMENT AND MATERIALS SELECTION
   1. Use of Hand Tools (boring, drilling, fastening, holding, prying, scraping, cutting, smoothing, finishing and painting)
   2. Use of Power Tools (routers, sanders, saws, jointers, planers, lathes, milling machines)
   3. Use of Tool Sharpening Equipment
   4. Adhesives
   5. Lumber and Plywood
   6. Fasteners
   7. Painting and Finishing
   8. Tracing and Duplicating Equipment

D. MEASURING, MARKING AND LAYOUT
   1. Measurement (tapes, squares, rules, gauges, calipers, micrometers)
   2. Marking (scribers, dividers, protractors, levels)
   3. Layout

E. CUTTING, FITTING AND FASTENING
   1. Cutting and Fitting Wood
   2. Cutting and Fitting Plastic
   3. Cutting and Fitting Metal
   4. Fastening Materials (nails, bolts, screws, adhesives, welding, soldering)
F. FINISHING AND PAINTING
   1. Sanding and Finishing
   2. Painting

G. CALCULATIONS
   1. Decimals, Fractions and Percentages
   2. Metric Conversions
   3. Ratio and Proportion
   4. Areas (rectangles, triangles, circles, polygon)
   5. Volumes
   6. Board Feet
   7. Geometric Construction
   8. Basic Trigonometry
   9. Estimations of Materials, Costs and Time

H. RELATED TASKS
   1. Reading Handbooks, Catalogs and Manuals
   2. Service Orders
   3. Computer Terminal Operation

I. PERSONAL QUALITIES
   1. Work Attitudes and Habits
   2. Listening Skills
   3. Communicating With Others
USER DIRECTORY EVALUATION

We welcome your evaluation of the National Apprenticeship Clearinghouse Directory which was forwarded to your organization during the last month. Your comments and suggestions will greatly assist the efforts of the Apprenticeship Clearinghouse staff to improve the utility and practicality of the DIRECTORY. Please feel free to use additional pages if necessary.

Please circle the following which best represents your evaluation of the guide.

<table>
<thead>
<tr>
<th></th>
<th>Weak</th>
<th>Strong</th>
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<tbody>
<tr>
<td>Organization of the Directory</td>
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<td>3</td>
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<tr>
<td>Completeness of the Instructions</td>
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<tr>
<td>Technical accuracy of the Content</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>Clarity of the included content</td>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>General utility of the Directory for field use</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
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</tbody>
</table>

If you answered any of the above items to the weak side of the scale or have other comments or concerns about the use of the DIRECTORY, please explain or suggest improvements below. Please note the section and page number(s) of the DIRECTORY where problems or concerns are located.

Comments: ____________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

From:

_____________________________________________________________________

_____________________________________________________________________

NAME ____________________________________________ INSTITUTION OR ORGANIZATION

Are you a: User_____ Supervisor of Users_____ ?

(Please check one)
EVALUATION FOR ELECTRONIC DATABASE CLEARINGHOUSE FOR APPRENTICESHIP RELATED TRAINING CURRICULUM MATERIALS
LANE COMMUNITY COLLEGE

DIRECTIONS:

5 = Excellent; 4 = Above Average; 3 = Average; 2 = Below Average; 1 = Not Acceptable

Hardware

1. The computer hardware has sufficient capacity to handle currently identified curriculum sources.  
   | 5 | 4 | 3 | 2 | 1 |

2. The hardware has sufficient capacity to allow expansion of database in the future.  
   | 5 | 4 | 3 | 2 | 1 |

3. The hardware is compatible with the hardware found in most user sites.  
   | 5 | 4 | 3 | 2 | 1 |

Software

4. The software package was obtained from a reputable source.  
   | 5 | 4 | 3 | 2 | 1 |

5. The software package is recognized by information retrieval specialists as a high quality system.  
   | 5 | 4 | 3 | 2 | 1 |

6. The software package is appropriate for retrieving data through the ERIC format or similar retrieval modes.  
   | 5 | 4 | 3 | 2 | 1 |

7. The software allows downloading from other databases.  
   | 5 | 4 | 3 | 2 | 1 |

8. The software is appropriate for use in field sites.  
   | 5 | 4 | 3 | 2 | 1 |

9. The software allows on-going updates of information.  
   | 5 | 4 | 3 | 2 | 1 |

Storage of Data

10. Procedural guidelines have been established for entering data into the system.  
    | 5 | 4 | 3 | 2 | 1 |

11. An editorial policy has been developed for screening materials to be entered in database.  
    | 5 | 4 | 3 | 2 | 1 |
12. Guidelines have been developed for updating the database.

13. Staff responsibilities and assignments have been identified for developing the database.

**Retrieval of Data**

14. Guidelines have been developed for making the database available to users.

15. A user guide has been developed for use in the field sites.

16. The user guide is readable and understandable.

17. Users can access the database with a minimum of computer expertise.

**Continuation Plans**

18. Plans have been developed for future expansion and improvement of the database.

19. Plans have been developed for financial maintenance of database beyond the funding of the project.

20. Strategies have been identified for searching out new sources of curriculum materials to include in the database.

**Inservice**

21. The inservice needs for new users have been identified by the project.

22. The format and content of user inservice has been clearly identified.
Dear Vendor,

Lane Community College of Eugene, Oregon is involved in the development of a national clearinghouse for apprenticeship related training materials and equipment. The clearinghouse will include listings of both public sector and private vendor materials in a print directory and on electronic disks. Users can identify sources of materials through electronic search procedures. A computer printout will supply the name of institutions and vendors who have materials fitting the search descriptors. In other words, the clearinghouse will refer the user to several choices of apprenticeship related training materials. Users can follow up with the institutions or vendors to obtain catalogs or materials.

We are mailing invitations to those vendors who have exhibited at the AVA Trade Show during the past two years and others who have been brought to our attention. Listing your product in the clearinghouse should offer some marketing advantages. It is a free service, but requires your approval or permission to become part of the clearinghouse files.

If you wish to become part of our vendor list, please complete and return the enclosed postcard. We are looking forward to a clearinghouse with a listing of over 3,000 sources. Hopefully, you can join us as one of those sources.

Sincerely,

Carl Horstrup, Project Director
Apprenticeship Related Training Clearinghouse
Lane Community College

Enclosure: postcard
RETURN POSTCARD

☐ Please list our firm in the clearinghouse directory.

FIRM NAME: ___________________________ 

ADDRESS: ____________________________

CITY, STATE, ZIP: ____________________

TELEPHONE: __________________________

CONTACT PERSON: ______________________

We offer the following types of materials/equipment/services that are appropriate for apprenticeship training programs.

☐ Booksprinted curriculum materials □ Tools/equipment

☐ Audio-visual aids □ Other ________

Carl Horstrup, Director
Apprenticeship Related Training
Materials Clearinghouse
Lane Community College
4000 E. 30th Avenue
Eugene, OR 97405
NATIONAL CLEARINGHOUSE
for
APPRENTICESHIP RELATED TRAINING MATERIALS

Lane Community College
4000 East 30th Avenue
Eugene, OR 97405

A project funded by the
Fund for Improvement of Post-Secondary Education (FIPSE)
U.S. Office of Education
CLEARINGHOUSE SERVICES INCLUDE:

- Print directory of resources available for apprenticeship related training.
- Electronic search and retrieval of apprenticeship related materials.
- Processes for design and development of curriculum materials.

TYPES OF RESOURCES INCLUDED IN CLEARINGHOUSE:

- Curriculum guides
- Course outlines
- Instructional modules
- Instructional equipment
- Instructional processes

MATERIALS CATALOGUED IN THESE CATEGORIES:

- General Apprenticeship
- Construction Trades
- Culinary Trades
- Electrical Trades
- Graphics Trades
- Heavy Equipment Operators
- Mechanics Trades
- Medical Trades
- Metals Trades
- Plumbing, Pipefitting and Steamfitting Trades
- Miscellaneous Trades
- Private and Semi-private Vendors

RESOURCES ARE AVAILABLE TO USER IN:

- Bibliography format
- Abstract format
- Ordering information

USERS CAN REQUEST:

- Copy of clearinghouse directory
- Electronic disks of specific categories of clearinghouse materials
- Assistance in locating instructional materials for specific program needs
CLEARINGHOUSE DEVELOPMENT AND TIMELINES:

1986 - Nationwide search for available materials.
    - Conduct a national needs assessment.
    - Organization of materials for retrieval.
    - Planning clearinghouse services.
    - Selecting software and hardware.

July
1987 - Field test of print directory.
    - Development of curriculum development processes.
    - Electronic retrieval system development.

July
1988 - Limited services available to users.

July
1989 - Full clearinghouse services available to user groups.

FOR FURTHER INFORMATION ON SERVICES OF THE CLEARINGHOUSE, WRITE OR CALL:

Carl Horstrup, Project Director
National Clearinghouse For Apprenticeship Related Training Materials
Lane Community College
4000 E. 30th Avenue
Eugene, OR 97405

Telephone: (503) 747-4501, ext. 2843
EVALUATION UPDATE

PHASE II

A MODEL SYSTEM FOR THE DESIGN AND MAINTENANCE OF RELATED INSTRUCTION CURRICULUM FOR APPROVED U. S. DEPARTMENT OF LABOR APPRENTICESHIP OCCUPATIONS

CARL HORSTRUP, PROJECT DIRECTOR
LANE COMMUNITY COLLEGE
4000 EAST 30TH STREET
EUGENE, OREGON 97405

Submitted by
E. WAYNE COURTNEY, THIRD PARTY EVALUATOR
3220 N. W. ARROWOOD CIRCLE
CORVALLIS, OREGON 97330
(503) 758-7325

July 16, 1988
INTRODUCTION

This report summarizes the activities for Phase II of the Project since the submission of the previous update (March 25, 1988). The second phase concerns itself with field and site implementation and with the establishment of vendor lists and user guides. The installation and testing of Xenix and BRS Search software has been a continuing major issue during this phase of the Project. The field testing and evaluation of the Directory were reported in the November 24, 1987 update. Additional field test data have been appended to those results in the present report. The third party evaluator’s role during Phase II is to assist the Project Director in assessing the practical problems associated with implementing the plan for materials’ usage in the field. The present report covers the scope of the above matters.
Phase II Progress

Phase II of the Project includes the evaluation of products and processes which were developed during Phase I. The following progress has been made in fulfilling the Phase II goals.

Objective 4.3. Conduct field test on Clearinghouse services.

The data which have been compiled on the evaluation of the directory are shown below. These data have been updated from the report of March 25, 1988, reflecting additional input by field reviewers. Additional field site reviews are pending from Inge Bornemann-Schrickel, Department of Vocational Education, Hamburg (Federal Republic of Germany) and from Stephen Barnett, Learning Resources, College of Technical and Further Education (South Australia). The instrument used to gather these data was provided in the previous report. Mean scores were calculated for each of the five (5) criteria and are based on a 4-point scale. The summary data are as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization of the Directory</td>
<td>3.43</td>
</tr>
<tr>
<td>Completeness of the Instructions</td>
<td>3.57</td>
</tr>
<tr>
<td>Technical accuracy of the content</td>
<td>3.28 *</td>
</tr>
<tr>
<td>Clarity of the included content</td>
<td>3.43</td>
</tr>
<tr>
<td>General utility of the Directory for field use</td>
<td>3.71</td>
</tr>
</tbody>
</table>

*Note: The evaluations for technical accuracy represent 57% of the responding states. Others reported that they had not tested this criterion.

These scores appear to indicate a high degree of acceptance for the utility of the directory and are considered to be a valid measure of the fitness of these materials for field use.
Objective 4.5. Revise model according to evaluations from field test sites

The results of the field test evaluations have not as yet been shared with Project Advisory Committee members as a group, although key personnel have been made aware of the reviews. It is anticipated that all field reviewers will submit their reports prior to the beginning of Phase III of the Project. Few changes are anticipated for the model at that time.

Objective 5.1. Develop mailing lists of institutions, private firms and organizations that are potential users of apprenticeship materials.

Lists of both public and private users are being compiled as specified in the proposal goals. These lists are in the hands of the Project Director and will be available in the near future.

Objective 5.2. Develop information package for dissemination.

A vendor use information postcard is being utilized for the Project (see Appendix). This vendor solicitation is being used in conjunction with the Clearinghouse brochure (see Appendix), constituting one of the primary methods for establishing a vendor mailing list for the Project. The listing of vendors, which include those who have exhibited at the AVA Trade Show during the past two years and others which have been identified by the Project staff, now approaches 300 names. These embody both public and private sector organizations and institutions which wish to make curriculum materials, instructional equipment and tools, instructional systems, audio-visual aids, and related hardware available to users. Users will be able to identify vendors through electronic search procedures. The brochure, along with other informational materials about the Project, have been made available for dissemination through meetings and conferences such as those conducted by NNCCVTE (see Appendix) and other organization meetings. Project staff participated in the NNCCVTE Concurrent Meeting held in Beaverton (Oregon) in the Curriculum Carousel Session on July 12, 1988. Clearinghouse informational materials were available to participants at that meeting. Each of the six (6) NNCCVTE Curriculum Coordination Centers have been contacted and will contribute curriculum materials to the Project, comprising an avenue for material dissemination.
Objective 5.4. Develop membership base for Clearinghouse utilization.

Plans are underway to install the Xenix operating system and the BRS software which will be involved in the management of the database for the Project. The essential elements of this plan are to complete the following:

1.) Create backup copies of the BRS Search and Xenix software.

2.) Install the Xenix operating system at full capacity in order to serve a maximum of ten (10) users at any one time.

3.) Prepare the modem for access through both Xenix and BRS Search and, if practical, through DOS.

4.) Establish a partition on the hard disk for the accommodation of DOS.

5.) Provide complete written procedures for bringing up Xenix, DOS, and BRS from an operating system perspective.

6.) Write a procedures manual for the operating system.

7.) Create a system administrator password for Xenix.

8.) Install an operating terminal in the office of the Project Director on the Lane Community College campus.

9.) Provide recommendations for word processing and communication's software to be installed on the DOS partition.

10.) Provide on-site training for office personnel on the steps involved in bringing up and using the Xenix operating system.

It is anticipated that the above steps will be completed during early Fall, 1988. This portion of the Project is behind schedule due to problems which were associated with the technical aspects of the operating system software. At the present time the database implementation appears to be moving ahead on a reasonable timetable.

The Phase III funding proposal was submitted on March 29, 1988 (see Appendix). The proposal seeks continuation funding for a third year in order to finalize the design and implementation of the model system.
APPENDIX

Vendor Solicitation Postcard and Referral Letter
NNCVTE Brochure
NNCVTE Concurrent Meeting Schedule
National Clearinghouse for Apprenticeship Training Materials Brochure
Phase III Proposal (dated March 29, 1988)
March 31, 1988

Dear Vendor,

Lane Community College of Eugene, Oregon is involved in the development of a national clearinghouse for apprenticeship related training materials and equipment. The clearinghouse will include listings of both public sector and private vendor materials in a print directory and on electronic disks. Users can identify sources of materials through electronic search procedures. A computer printout will supply the name of institutions or vendors to obtain catalogs or materials.

We are mailing invitations to those vendors who have exhibited at the AVA Trade Show during the past two years and others who have been brought to our attention. Listing your product in the clearinghouse should offer some marketing advantages. It is a free service, but requires your approval or permission to become part of the clearinghouse files.

If you wish to become part of our vendor list, please complete and return the enclosed postcard. We are looking forward to a clearinghouse with a listing of over 3,000 sources. Hopefully, you can join us as one of those sources.

Sincerely,

[Signature]

Carl Horstrup, Project Director
Apprenticeship Related Training Clearinghouse
Lane Community College
RETURN POSTCARD

☐ Please list our firm in the clearinghouse directory.

FIRM NAME: ________________________________

ADDRESS: ________________________________

CITY, STATE, ZIP: __________________________

TELEPHONE: ______________________________

CONTACT PERSON: __________________________

We offer the following types of materials/equipment/services that are appropriate for apprenticeship training programs.

☐ Books/printed curriculum materials ☐ Tools/equipment

☐ Audio-visual aids ☐ Other ________

Carl Horstrup, Director
Apprenticeship Related Training
Materials Clearinghouse
Lane Community College
4000 E. 30th Avenue
Eugene, OR 97405
TO REQUEST INFORMATION...

- Order a copy of the clearinghouse directory.
- Ask for electronic disks covering specific categories of clearinghouse materials.
- Secure assistance in locating instructional materials for specific program needs.

for INFORMATION or SERVICES, call or write:

Carl Horstrup, Project Director
NATIONAL CLEARINGHOUSE FOR APPRENTICESHIP RELATED TRAINING MATERIALS
Lane Community College/Apprenticeship Department
4000 E. 30th Avenue
Eugene, Oregon, USA 97405

Telephone:
(503) 747-4501 ext. 2843 (until June, 1989)
(503) 741-3073 (after May, 1989)

LOCATE APPRENTICESHIP RELATED TRAINING MATERIALS FOR...

- General Apprenticeship
- Construction Trades
- Culinary Trades
- Electrical Trades
- Graphics Trades
- Heavy Equipment Operators
- Mechanics Trades
- Medical Trades
- Metals Trades
- Plumbing, Pipefitting and Steamfitting Trades
- Miscellaneous Trades
- Private and Semi-private Vendors

through the NATIONAL CLEARING HOUSE for APPRENTICESHIP RELATED TRAINING MATERIALS in Eugene, Oregon, USA

A project funded by the Fund for Improvement of Post-Secondary Education (FIPSE)
U.S. Department of Education

Lane Community College
4000 East 30th Avenue
Eugene, Oregon, USA 97405
(503) 747-4501 ext. 2843 (until June, 1989)
(503) 741-3073 (after May, 1989)
MINI CURRICULUM GUIDES
- Mechanics Trades
- Medical Trades
- Metals Trades
- Plumbing, Pipefitting, and Steamfitting Trades
- Miscellaneous Trades
- Private and Semi-private Vendors

THE CLEARING HOUSE OFFERS:
- Course outlines
- Instructional modules
- Teaching materials
- and processes

CLEARING HOUSE SERVICES:
- PRINT...a directory presenting apprenticeship related training resources
- DATA BASE...electronic search and retrieval of apprenticeship related materials
- DESIGN AND DEVELOPMENT...support of processes for design and development of curriculum material
- RESOURCE FORMATS...bibliographies, descriptions and ordering information.

MATERIALS CATALOGED:
- General Apprenticeship
- Construction Trades
- Culinary Trades
- Electrical Trades
- Graphics Trades
- Heavy Equipment Operators

- Miscellaneous Trades
- Private and Semi-private Vendors
- General Apprenticeship
- Construction Trades
- Culinary Trades
- Electrical Trades
- Graphics Trades
- Heavy Equipment Operators
- Miscellaneous Trades
- Private and Semi-private Vendors
What is the NNCCVTE

The National Network for Curriculum Coordination in Vocational and Technical Education is referred to as the NNCCVTE or the National Network. The NNCCVTE is made up of six regional Curriculum Coordination Centers or CCCs and a network of State Liaison Representatives or SLRs. The SLRs, one in each state and trust territory, provide educators with curriculum materials from the CCCs and can assist them in the development of curriculum and instructional materials.

The six regional Curriculum Coordination Centers serve the states and trust territories in their regions. A map inside identifies the states in each region and the location of the Curriculum Centers. Get to know your SLR and learn more about the NNCCVTE by contacting the nearest CCC.
Six regional centers full of resources!
We can meet your needs.

A representative in your state!
Your personal link to information.

State of the art technical assistance!
Tap our expertise.

Access to the best voc ed materials!
Your state representative knows the latest.

A pipeline of information!
If we don't have it, we'll get it.

Our own computerized database!
We fill your request quickly.

The desire to help you!
You can have the best voc ed program.

The know-how!
In existence since 1972.

Our resources include:
Curriculum Products
Textbooks
Reports
Task List Clearinghouse
Curriculum Consortium
Electronic Messages
Databases
Software
State Plans
Meetings
Newsletters
Business & Industry Linkages
Task List Verification

Our services are:
Free
Quick
Personalized

Best copy available
SATURDAY, JULY 9
8:00 - 5:00  CURRICULUM CENTER DIRECTORS MEETING
12:00 - 5:00  REGISTRATION - Foyer

SUNDAY, JULY 10
8:00 - 5:00  REGISTRATION - Foyer
8:00 - 12:00  CCC DIRECTORS MEETING
8:00 - 12:00  VIM AWARDS COMMITTEE
1:15 - 2:00  OPENING SESSION......
  Bill Daniels, Moderator
  • Welcome to NNCCVTE/NWCCC
    Bill Daniels
  • Welcome to Oregon
    Monty Multanen
    State Director of Vocational Education
  • News from Washington
    Bernice Anderson
    U.S. Department of Education

2:00 - 4:30  SLR ORIENTATION/ISSUES FORUM
  Session A - New SLR Orientation -
    Don Esbelby, Idaho
    Meg Murphy, North Carolina
  Session B - Update for Returning SLRs -
    Joyce Sawatzky, Moderator

4:30 - 5:00  GENERAL SESSION
  ...Moderator
  • Introduction of SLRs
    Northwest CCC
    Western CCC
    Midwest CCC
    East Central CCC
    Southeast CCC
    Northeast CCC
  • New SLR Awards

5:30 - 7:30  THE OREGON RECEPTION
  Special Activity - Dave McQuat, Florida SLR
MONDAY, JULY 11

7:00 - 8:30 PRODUCT REVIEW AND COUPE
   Ted Glenn, District of Columbia SLR
   Patt Stonehouse
   Georgia Office of Postsecondary Education

8:30 - 9:00 OPENING SESSION
   Jimmy McCully, Moderator
   • National Recognition Award
   • Door Prizes
     Joyce Keefer-Leimbach, Ohio SLR
     Verdell Jackson, Alaska SLR
   • Announcements
   • Days Activities

9:00 - 9:30 WORKING WITH BUSINESS AND INDUSTRY
   Clifton Belcher, North Carolina
   State Director of Vocational Education

9:30 - 10:30 CUSTOMIZING CURRICULUM TO MEET THE NEEDS OF INDUSTRY
   Roseanne Schaat, Maine SLR - Facilitator
   Tom Fahey, Wacker Siltronics, Portland, Oregon
   Harley Schlichting, Missouri SLR
   Dan Sempert, Director, Industry Training
   Portland (OR) Community College
   Pam Van Ast, Senior Training Consultant
   DMACC, Ankee, Iowa

10:30 - 10:45 BREAK

10:45 - 12:00 DISCUSSION GROUPS - WORKING WITH INDUSTRY AS AN SLR
   Joan Briggaman, Connecticut SLR, Facilitator

12:00 - 1:30 REGIONAL LUNCHES (SLRs only)
   Northwest
   Western
   Midwest
   East Central
   Southeast
   Northeast

1:30 - 5:00 REGIONAL MEETINGS
   Northwest
   Western
   Midwest
   East Central
   Southeast
   Northeast
6:00 - 8:00  Western Region Dinner
(WCCC SLRs only)

6:00 -  Buses leave for Portland Waterfront
Dinner on your own

9:30  Buses leave Portland Waterfront for Greenwood Inn

TUESDAY, JULY 12

7:00 - 8:30  Product Review & Coffee
Ted Glenn and Patt Stonehouse

8:30 - 8:45  Opening Session
Rebecca Douglas, Moderator
- Door Prizes
- Announcements
- Days Activities

8:45 - 9:45  Demographic and Ethnic Changes: Implications for Education
Dick Jones, New York SLR, Moderator
Dr. James A. Banks
University of Washington, Seattle

9:45 - 10:30  Curriculum for Alternative Programs
Paul Erickson, Director
Vocational Village, Portland, Oregon

10:30 - 10:45  Break

10:45 - 12:00  Discussion Groups: Implications for Curriculum Activities
Dick Jones, New York SLR, Facilitator

12:00 - 1:00  Lunch

1:00 - 1:15  General Session
Martha Pocsi, Facilitator

1:15 - 2:30  Vendor Show
1/2 of group
OR
Curriculum Carousel
1/2 of group
(Choice of 3)
- ERIC
  Judy Wagner, Ohio State University
- V-TECS Basic Skills Project
  Ron McCage, Director, V-TECS
- MAVCC New Products
  Greg Pierce, Director, MAVCC
- AIT - Exploring Technology
  Jennie Lucroy, Director of Development
- CORD - Applied Biology/Chemistry
  Ray Thiess, Oregon Department of Education
- Apprenticeship Data Base
  Carl Norstrum, Lane Community College, Eugene, Oregon
2:30 - 2:45  BREAK

2:45 - 4:00  REPEAT OF ABOVE
   Groups switch rooms

4:00 - 5:00  RECEPTION OF NORTHWEST OFFICERS WITH VENDORS
   Hosted by NW SLRs
   • Vendor Awards

6:00  DINNER
   (Please dress casually)

WEDNESDAY, JULY 13

7:00 - 8:30  PRODUCT REVIEW AND COFFEE
   Ted Glenn and Patt Stonehouse

8:30 - 8:45  OPENING SESSION
   Joyce Sawatzky, Moderator
   • Door Prizes
   • Planning Awards
   • Announcements

8:45 - 10:15  SESSION A: COMPUTER APPLICATIONS IN CURRICULUM
   Dave Huelbauer, Arizona SLR, Facilitator

10:15 - 10:30  BREAK

10:30 - 12:00  LUNCHEON
   Larry Zane, Moderator
   Speaker: Ian Browde
   Apple Computer
   • Years of Service Awards
   Martha Pocsi

1:45 - 5:00  REGIONAL MEETINGS - TBA
   (continued)

   ERIÇ WORKSHOP

   FIELD TRIP
THE COMPREHENSIVE PROGRAM
FUND FOR THE IMPROVEMENT OF POSTSECONDARY EDUCATION

CONTINUATION: Year 2 ☑ Year 3 ☒

This application should be sent to:
No. P11688
U.S. Department of Education
Application Control Center
Room 3633
Washington, D.C. 20202

1. Application No.
116 AH 60362 (SH)

2. Employer Identification No.
930546223

3. Legal Applicant Lane Community College
Legal Applicant Name

4. Project Director Carl Horstrup
Name and Title Apprenticeship Coordinator
Lane Community College

5. Federal Funds Requested:

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st (Rec'd)</td>
<td>$98,901</td>
</tr>
<tr>
<td>2nd Year</td>
<td>97,383</td>
</tr>
<tr>
<td>3rd Year (If Applicable)</td>
<td>91,777 *</td>
</tr>
<tr>
<td>Total Amount:</td>
<td>$288,061</td>
</tr>
</tbody>
</table>

*reflects $5,043 reduction

6. Institutional Information

<table>
<thead>
<tr>
<th>Type of Control</th>
<th>Highest Degree Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Public</td>
<td>☑ 2 Year</td>
</tr>
<tr>
<td>☐ Private, Non-Profit</td>
<td>☐ 4 Year</td>
</tr>
<tr>
<td>☐ Private, for Profit</td>
<td>☐ Graduate</td>
</tr>
<tr>
<td>☐ Non-Degree Granting</td>
<td></td>
</tr>
</tbody>
</table>

7. Duration of Project:

<table>
<thead>
<tr>
<th>Starting Date of next budget period</th>
<th>Ending Date of next budget period</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1, 1988</td>
<td>June 30, 1989</td>
</tr>
</tbody>
</table>

| Total No. of Months | 12 |

8. Population Directly Benefiting From The Project

The 300,000 apprentices enrolled in training will benefit from improved access to quality curriculum materials.

9. Proposal Title: A model system for the design and maintenance of related instruction curricula for approved U.S. Department of Labor Apprenticeship Programs

10. Brief Abstract of Proposal: (Do not leave this blank)

This proposal seeks continuation funds for establishing a national clearinghouse for apprenticeship related instructional materials at Lane Community College. The first two years of this project were directed toward identification of materials, the design and field testing of the delivery system. This system will include both electronic and printed format. This proposal seeks continuation funding to finalize the design of the overall project and implement its usage nationwide.

11. Certification By Authorizing Official

The applicant certifies to the best of his/her knowledge and belief that the data in this application are true and correct and that the filing of the application has been duly authorized by the governing body of the applicant.

Dr. Richard Turner III
President, Lane Community College (503)

Signature

Date March 29, 1988

Phone 747-4501
BUDGET

Salaries & Wages
Salaries and wages have been for a total of a .29 position, with a 5% raise over last year. The primary individuals previously employed in this category (in years 1 and 2 of this grant (before revisions) have subsequently established private companies thereby requesting payment through the consultant category.

originally requested
$55,120

now requested
$7,100

Employee Benefits
Employee benefits were calculated at an average of 20.35%

originally requested
$3,790

now requested
$1,445

Travel
All is based on federal rates as currently used by LCC (typical form attached). Presently, no change of amount is requested.

originally requested
$6,830

now requested
$6,830

Equipment
This area indicates a reduction of $5,070. Years one and two provided nearly adequate funding for overall equipment needs thereby allowing decrease for year three.

originally requested
$7,240

now requested
$2,170

Materials & Supplies
Materials are to be disseminated as requested in either print or diskette format. Continually, a large outlay of various supplies and software will be needed to finalize the establishment of the clearinghouse. Additionally, continuing purchase of various trade materials and guides will be needed as backup material for the reference library. No dollar change requested.

originally requested
$8,400

now requested
$8,400

Consultants
The third party evaluator will be retained at the same level as in years one and two. The evaluations will continue to be a critical need in the overall development of the clearinghouse project. As indicated above under "salaries and wages", numerous individuals previously funded under salaries and wages have chosen to be reimbursed under this category.
These individuals include, but are not necessarily limited to, the position of Project Director, Project Coordinator, East Coast Field Researcher, and assorted researchers and writers.

<table>
<thead>
<tr>
<th>Originally Requested</th>
<th>Now Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,750</td>
<td>$58,172</td>
</tr>
</tbody>
</table>

**Other Costs**

This item represents reproduction costs for numerous instructional modules that will be made available for dissemination. No change requested.

<table>
<thead>
<tr>
<th>Originally Requested</th>
<th>Now Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,430</td>
<td>$6,430</td>
</tr>
</tbody>
</table>

**Indirect Costs**

Indirect costs are computed at 8% of salaries, employee benefits, and travel costs.

<table>
<thead>
<tr>
<th>Originally Requested</th>
<th>Now Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,260</td>
<td>$1,230</td>
</tr>
</tbody>
</table>

Note: Reduction in this area due to requested reduction of salary and fringe benefits, with difference allocated to consultant monies for additional services.

**Totals**

<table>
<thead>
<tr>
<th>Originally Requested</th>
<th>Now Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>$96,820</td>
<td>$91,777</td>
</tr>
</tbody>
</table>
## BUDGET

**Year** 2 (circle one)  
(Use Same Format for Each Continuing Year)

### BUDGET ITEM

**A. Direct Costs:**

1. Salaries & Wages (Professional and Clerical)  
   $ 7,100

2. Employee Benefits  
   1,445 (20.35%)

3. Travel  
   6,830

4. Equipment (Purchase)  
   2,170*

5. Materials & Supplies  
   8,400

6. Consultants or Contracts  
   58,172**

7. Other (Equipment rental, Printing, etc.)  
   6,430

**B. Indirect Costs:**

TOTAL Requested from the Fund (This Figure Should Appear on the Title Page)  
$ 91,777***

Institutional Support (Project costs not requested from the Fund)  
$ 34,875

**Current LCC HEW approved indirect cost rate 38%.

---

*Most items will need to be detailed in the Budget Narrative at the Final Proposal stage. This includes a breakdown of the institutional support.*

*Indicates a reduction of $5070. Years #1 and #2 allotments provided most of needed equipment for entire project.*

**Includes professional services (private companies) and program evaluator.*

***Overall request for year #3 from the FUND represents 5% less than originally anticipated.*
I. ANNUAL REPORT

A. Project Activities During Current Year

The project has followed the goals and objectives of the original proposal in completing Phase II activities. Some Phase I objectives were short of completion at the end of last project year. Those objectives have been fulfilled. In addition, the Phase II objectives have been met. The best method for evaluating the progress of this project is to discuss the original goals and objectives of the project. First, the unfinished objectives of Phase I will be discussed, followed by Phase II.

Phase I Goals and Objectives

GOAL 2.0 Design instructional materials.

Objective 2.1 Identify needs for future curriculum work.

A task inventory process was conducted on the three curriculum gaps identified in the needs assessment. Completed task inventories were tallied and analyzed for instructional content. Specific lists of recommended modules were identified for development by the trades. The three occupations in which curriculum materials need to be developed are painter, patternmaker and machine repairer.

Objective 2.2 Recommend processes for development of instructional materials.

A process model has been defined for developing new curriculum and updating existing curriculum materials. The process model has been finalized in written format.

GOAL 3.0 Provide easy access to apprenticeship related instructional materials.

Objective 3.1 Establish a computerized database of apprenticeship materials.

This objective has required additional time for development. Although the print directory and materials for downloading the electronic system have been collected since the first project year, the hardware selection process has been more time-consuming. The project has attempted to obtain hardware that is appropriate to the needs of the database. Hardware and software are currently in place. The database is being downloaded from existing databases and new materials are being keyboarded into the system. Although this component of the clearinghouse has been slower in its development than anticipated in the original proposal, the project staff believe it to be a realistic and workable system.

The "User Guide" is being developed by increments as the electronic database is defined. A final copy of the "User Guide" for electronic retrieval will be completed after the system has been fully tested. A
"User Guide" was developed for accessing materials through the print directory and is included in the forepart of the print directory. The final revision of the "User Guide" will provide specific instructions for accessing the system through the print directory and electronic search procedures.

Phase II Goals and Objectives

Goal 4.0 Conduct field tests on products and processes.

Phase II has been largely devoted to field testing the instructional materials collected for the clearinghouse and to analyze the results of the field test. The project director mailed copies of the print directory and evaluation forms to a representative sample of users across the United States and Canada. Their completed evaluations were summarized and included in the report of the third party evaluator. (See attached evaluation report.)

An evaluation instrument has been completed for evaluating electronic access to clearinghouse services. A copy of that instrument is included with the third party evaluation report.

Beyond the field test, many other developmental activities have been under progress during this year.

- Enhancing the visibility of the clearinghouse at meetings, conferences and through telephone and mail contacts.

- Assisting users in finding materials appropriate to their training needs. The project director is responding to a regular flow of requests from apprenticeship training institutions across the country. Until the clearinghouse is fully in place, the project director accepts a responsibility for meeting requests.

- Making continuation plans for the clearinghouse to assure its long-range survival and accessability to the user. This has involved discussions with community colleges, apprenticeship councils and other user groups on how to assure the future of the clearinghouse.

- Continuing the effort to find quality instructional materials in both the public and private sectors. An additional 150 private vendors were recently contacted for materials listings to include in the clearinghouse. A total of 250 or 300 private vendors will be listed.

- Making hardware evaluations and selections to assure optimum compatibility of software, hardware and the user.

- Developing promotional materials for informing potential users of available services. A brochure has been developed in rough format and will be in print form in the immediate future.
GOAL 6.0 Evaluate all phases of model development as a basis for improvement.

Objective 6.1 Provide formative evaluation for project development.

Dr. Wayne Courtney, third party evaluator, meets on a regular basis with project staff. He provides the project with on-going evaluation findings. The evaluations are utilized to make modifications and refinements in the project activities.

Objective 6.2 Provide summative evaluation for the project.

The third party evaluator provides summative evaluations at the end of each phase of the project. Interim evaluations are conducted periodically throughout the project year upon request of the Project Director. Four interim evaluation reports have been completed during this project year.

Expected Results of Current Year Activities

- Field testing of all print materials and processes will have been completed by user sites in U.S. and Canada.
- Electronic database will be in place with hardware, software, information, identified procedures for accessing the information and processes for evaluating its accessibility.
- Curriculum processes for developing new and updating old curriculum will be clearly identified.
- Recommendations will have been made for developing curriculum for areas identified in the gap analysis.
- Promotional materials will be available for informing potential users about the services of the clearinghouse.
- A wide range of clearinghouse users will be identified and informed about services of clearinghouse.

B. Problems Faced During Year

The acquisition of computer hardware has been the major problem for this project. During the development of the clearinghouse, the needs seemed to change each time information was added or design features were modified. This led to some indecision and delay in hardware acquisition. The hardware is now in place. Such delays have impacted a few of the activities that were to occur after the hardware was set in place. Project staff believe that the delays were justifiable and have resulted in better selections of hardware. The project will be back on its timelines by the end of the current project year.

Some frustrations occur when people are involved with the identification, screening and documentation of the vast quantities of materials to be included in the clearinghouse. The vast resource of curriculum materials
is widely scattered throughout institutions, agencies and private companies. Access to these curriculum resources is only partially defined. This fact creates frustration among those who attempt to seek out the sources of quality materials. Even though frustrating, it clearly substantiates the need for establishing the clearinghouse.

C. Status of Evaluation Plan

Evaluation

A third party evaluator, Dr. Wayne Courtney, is an active member of the project team. Dr. Courtney provides on-going formative evaluation reports to the project director and summative evaluation reports at the end of each phase of the project. An interim evaluation report is used for both formative and summative purposes. The evaluator will continue this level of effort during Phase III of this project.

D. Dissemination

The project director has a wide audience of apprenticeship related training providers across the United States and Canada. Contacts have also been made with private vendors who have materials to be listed in the clearinghouse. National conferences offer one avenue for dissemination. For example, the project coordinator has attended the last two AVA Convention Trade Shows for the purpose of contacting private vendors.

The project director has attended meetings across the country; visited many training sites; and presented the clearinghouse at state level functions in Oregon and other states. Clearinghouse activities have been published in several national publications. Individual contacts have been made with field test sites; sites cooperating with a task inventory process; and those making inquiries based on news articles.

Although dissemination has not been a major focus because of the developmental status of the clearinghouse, there appears to be an awareness of its existence across the country. The coming year will focus on the development of the user base and will involve more formalized processes of dissemination.

E. Continuation Plans

Continuation plans have been made for the clearinghouse. Lane Community College will continue its role as the clearinghouse center. In addition, the American Association of Community and Junior Colleges (AACJC) will provide modem access to the clearinghouse materials for its 1230 member institutions. The AACJC has an information network "ACCESS" in place for its member colleges.

Lane Community College will continue with its responsibility for updating the information base. The system can also be accessed at Lane Community College by modem. Community Colleges will be served by AACJC as part of an on-going system. Lane Community College will serve those who cannot access
The support of Dr. Dale Parnell of the AACJC assures the continuation of the clearinghouse beyond the funding period of this project.

D. Financial Status

The financial status of the project on February 29, 1988 was as follows:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>BUDGETED</th>
<th>EXPENDITURES</th>
<th>COMMITTED BALANCE</th>
<th>UNCOMMITTED BALANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL BUDGET</td>
<td>$ 97,383.00</td>
<td>$ 53,030.09</td>
<td>$ 12,786.00</td>
<td>$ 31,566.91</td>
</tr>
<tr>
<td>EXPENDITURES</td>
<td>$ 53,030.09</td>
<td>$ 12,786.00</td>
<td>$ 31,566.91</td>
<td></td>
</tr>
<tr>
<td>COMMITTED BALANCE</td>
<td>$ 12,786.00</td>
<td>$ 31,566.91</td>
<td>$ 31,566.91</td>
<td></td>
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<tr>
<td>UNCOMMITTED BALANCE</td>
<td>$ 31,566.91</td>
<td>$ 31,566.91</td>
<td>$ 31,566.91</td>
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</tbody>
</table>

The balances on February 29, 1988 for each category of funds are shown below. Lane Community College's budget categories differ slightly from those shown on the budget.
II. CONTINUATION PROPOSAL

A. Future Project Activities

Project plans for 1988-89 are centered about Phase III activities of the original proposal. The project will continue to refine the clearinghouse components developed in Phase I and II and concentrate on dissemination to a broad range of users in the United States and Canada.

The following goals, objectives and activities will be targeted for 1988-89.

GOAL 5.0 Disseminate information on model to potential users.

Objective 5.1 Develop mailing lists of institutions, private firms and organizations who are potential users of apprenticeship materials.

Mailing lists of contacts have been developed during Phase I and II. These lists will be expanded and refined during Phase III.

Objective 5.2 Develop information package for dissemination.

An introductory brochure has been developed for mass mailings to potential users. A more complete package of information will be compiled by July 1988 for dissemination to those responding to the brochure and seeking further information.

Objective 5.3 Mail information packages to all potential user groups.

A mass mailing of the information package will be made to those groups who are traditional users of apprenticeship materials, i.e. community colleges, apprenticeship training divisions, State Departments of Education. Other potential users (i.e. private sector) will be identified as they respond to the brochure.

Objective 5.4 Develop membership base for clearinghouse utilization.

Membership in the user group will be established once adequate information has been provided through the information package. This group will receive full access to the clearinghouse through the print directory and electronic database. This activity will require a massive effort in communication and coordination.

Objective 5.5 Conduct inservice workshops on clearinghouse services.

Clearinghouse members will be given an opportunity to attend training sessions on access and use of curriculum materials. Inservices will be scheduled in conjunction with state, regional and national conferences and meetings in order to maximize the involvement of user groups. The inservice sessions are critical to the dissemination effort.
GOAL 6.0 Evaluate all phases of model development as a basis for improvement.

Objective 6.1 Provide formative evaluation for project development.

Formative evaluation has played an important role in Phase I and II. The third party evaluator will continue to monitor project activities as a member of the management team. Dr. Wayne Courtney will remain as the project evaluator. Evaluation updates will be provided to the project staff on a monthly basis or at the request of the project director. Formative evaluation will be conducted until the end of the project.

Objective 6.2 Provide summative evaluation of the project.

The third party evaluator provides summative evaluation reports at the end of each phase of the project. Interim evaluation reports are also conducted at various milestones during the project year. The interim reports serve both summative and formative functions. Dr. Wayne Courtney will continue to supply summative evaluation to this project.

GOAL 7.0 Operate clearinghouse as an on-going materials dissemination center (continuation beyond Phase III).

Planning for continuation will be a high priority for this year. Since this is the third year of funding, the clearinghouse service must be firmly established and continuation agreements clearly defined. At this point in time, future alternatives have been identified and discussed. The best alternative will be selected to assure that the clearinghouse services will continue beyond the funded project.

It appears that the most viable option is to house the clearinghouse at Lane Community College and the American Association of Community and Junior Colleges in Washington D.C. All community colleges have existing computerized linkages with the AACJC. Other users can access the clearinghouse at Lane Community College. The project seeks to establish access for all users who need the clearinghouse service.

The expected results of next year's project activities are:

1. A refined, streamlined database of apprenticeship related training materials;
2. Well-defined modes for accessing database to include both print format and electronic search procedures;
3. A well-informed user group throughout the U.S. and Canada;
4. An identified membership for using clearinghouse services;
5. User group trained through inservices on how to access clearinghouse efficiently; and
6. Firm commitment from institutions and user groups to the continuation of clearinghouse services beyond the funding period.
### Part 1 Travel Request

<table>
<thead>
<tr>
<th>LAST NAME</th>
<th>FIRST NAME</th>
<th>MIDDLE INITIAL</th>
<th>SOCIAL SECURITY NUMBER</th>
</tr>
</thead>
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Conference or Trip ____________________________  
Date/Month of Expense ____________________________  
Conference Location ____________________________  
Purpose of Conference ____________________________  
Approval ____________________________

<table>
<thead>
<tr>
<th>DEPARTMENT BUDGET ADMINISTRATOR DATE</th>
<th>VICE PRESIDENT DATE</th>
</tr>
</thead>
</table>

**TRANSPORTATION TO BE PAID BY LCC**
- COMMERCIAL [ ]  
- COLLEGE CAR [ ]  
- PRIVATE AUTO [ ]

**REGISTRATION FEE TO BE PAID BY LCC**
(PLEASE ATTACH ENTIRE BROCHURE ON CONFERENCE WITH COMPLETED REGISTRATION FORM)

Name: ____________________________  
Address: ____________________________

### Part 2 Expense Reconciliation (Please attach all receipts)

<table>
<thead>
<tr>
<th>DATE</th>
<th>DESTINATION</th>
<th>PRIVATE AUTO MILES</th>
<th>BREAKFAST</th>
<th>LUNCH</th>
<th>DINNER</th>
<th>LODGING</th>
<th>DAILY TOTAL</th>
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</tbody>
</table>

**Other Expenses (not previously paid by LCC)**
- Registration Fees ____________________________  
- Transportation Fees ____________________________  
- Parking ____________________________  
- Telephone Calls ____________________________  
- Miscellaneous ____________________________  
- Total Other ____________________________

I certify that the travel expense as itemized above has been made in the performance of official Grant or College duties, all in accordance with Lane Community College policy and grant requirements.

**Signatures below required after reconciliation completed**
EVALUATION REPORT

PHASE II

A MODEL SYSTEM FOR THE DESIGN AND MAINTENANCE OF RELATED INSTRUCTION CURRICULUM FOR APPROVED U. S. DEPARTMENT OF LABOR APPRENTICESHIP OCCUPATIONS

CARL HORSTRUP, PROJECT DIRECTOR
LANE COMMUNITY COLLEGE
4000 EAST 30TH STREET
EUGENE, OREGON 97405

SUBMITTED BY
E. WAYNE COURTNEY, THIRD PARTY EVALUATOR
3220 N. W. ARROWOOD CIRCLE
CORVALLIS, OREGON 97330
(503) 758-7325

OCTOBER 12, 1988
THE PROJECT continues into its third phase with strong support from various groups such as AACJC, NNCCVTE and other agencies. This update reports on Project activities which have been concluded since the previous report (July 16, 1988) and contains the current status of the evaluation measures for Phase II. The second phase of the Project had as its major thrust the field testing of the model, the DIRECTORY, and materials usage.

The field evaluation of the DIRECTORY continues to receive input from sites representing selected states and provinces in the United States and Australia. The results of these data are presented with this report, along with planning events which are forthcoming in Phase III as a result of Phase II activities.

Hardware items which have been secured for the Project and which are now operational at the Lane Community College site include an AST Premium 286 computer, an Okidata laser printer, and a Leading Edge monitor. Software which is being utilized with this equipment include BRS/SEARCH (Version 3.0), which runs on Xenix System V (Release 2.2). This combination appears to adequately meet the immediate and future requirements for the Project as it moves into Phase III and beyond.
PHASE II PROGRESS

Phase II of the project includes the evaluation of products and processes which were developed during Phase I. The following progress has been made since the last report in fulfilling the Phase II goals.

Objective 4.3. Conduct field test on Clearinghouse services.

The data which have been compiled on the evaluation of the directory are shown below. These data have been updated from the report dated 16 July 1988, reflecting additional input by field reviewers. Additional field site reviews are pending. The instrument used to gather these data was provided in the previous report. Mean scores were computed for each of five (5) criteria and are based on a 4-point scale. The summary data are as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization of the directory</td>
<td>3.36</td>
</tr>
<tr>
<td>Completeness of the instructions</td>
<td>3.73</td>
</tr>
<tr>
<td>Technical accuracy of the content</td>
<td>3.50 *</td>
</tr>
<tr>
<td>Clarity of the included content</td>
<td>3.55</td>
</tr>
<tr>
<td>General utility of the directory for field use</td>
<td>3.73</td>
</tr>
</tbody>
</table>

* Note: The evaluations for technical accuracy represent 73% of the responding sites. Others reported that they had not as yet tested the 'technical accuracy of the content' criterion.

These criteria measures appear to indicate a high degree of acceptance for the utility of the directory and are judged to be valid gauges of the fitness of these materials for field use.
Objective 4.5. Revise model according to evaluations from field test sites

A total of ten (10) states, plus the College of Technical and Further Education in Gilles Plains, Australia, have submitted evaluation results for the field testing of the DIRECTORY materials. Figure 1 shows the location of those states which have submitted evaluation reviews. Key project personnel have been made aware of the results of these field reviews. Few changes are anticipated for the model as the project moves into Phase III.

Objective 5.1. Develop mailing lists of institutions, private firms and organizations that are potential users of apprenticeship materials.

Lists of both public and private users have been compiled as specified in the proposal goals. These lists are in the hands of the Project Director. Vendor names continue to be added to the list of potential users.

Objective 5.2. Develop information package for dissemination.

The Project continues to receive recognition and advertising through its constituent support agencies. Arrangements have been made to disseminate information packets and the Clearinghouse DIRECTORY at the Annual NNCCVTE meeting to be held in Kansas City during July 9-12, 1989 (see Appendix). Additionally, a FIPSE Project announcement and information page has been included as a part of the Oregon Bureau of Labor and Industries report dated July, 1988 (see Appendix). Clearinghouse information brochures have been made available on a request basis from the Project Director’s office on the Lane Community College campus.

Objective 5.4. Develop membership base for Clearinghouse utilization.

The Xenix V operating system and the BRS software which will be involved in the management of the database for the
The essential elements of the process for implementing the database and the operational procedures for the Project included the following:

1.) Create backup copies of the BRS/SEARCH and Xenix V software.

2.) Install the Xenix V operating system at a capacity which would serve a maximum of ten (10) users at any one time.

3.) Prepare the modem for access through both Xenix V and BRS/SEARCH and, if practical, through DOS.

4.) Establish a partition on the hard disk for the accommodation of DOS.

5.) Provide complete written procedures for bringing up Xenix V, DOS, and BRS from an operating system perspective.

6.) Write a procedures manual for the operating system.

7.) Create a system administrator password for Xenix V.

8.) Install an operating terminal in the office of the Project Director on the Lane Community College campus.

9.) Provide recommendations for word processing and communication's software to be installed on the DOS partition.

10.) Provide on-site training for office personnel on the steps involved in bringing up and using the Xenix V operating system.

The operating system is now in place and is operational. The system itself is connected to and interactive with the Lane Community College mainframe system, with modem access to users outside the local network. The phasing of this activity into existing Project plans which are associated with Phase III seems to be manageable at the present time.

Notification has been received that Phase III of the Project has been funded. Phase III is the dissemination and field utilization phase year for the Project. The Phase III proposal was included in the July 16th Third Party Evaluation Update. A Future Project Activities goals statement is included in the Appendix.
OVERTURES HAVE BEEN MADE BY THE UNITED STATES DEPARTMENT OF LABOR (USDL) TO FUND PORTIONS OF THE PROJECT FOLLOWING THE PRESENT FISCAL TIMETABLE FOR PHASE III. THIS ASPECT OF THE PROJECT'S CONTINUATION BEYOND PHASE III SEEMS APPROPRIATE AND NECESSARY TO THE FUTURE OF THE CLEARINGHOUSE ITSELF. MR. RON JOHNSON, FIELD REPRESENTATIVE OF USDL, HAS ADVANCED SUPPORT AND ENCOURAGEMENT FOR SUCH FUNDING AS IT RELATES TO PROJECT 2000. IT IS RECOMMENDED THAT THIS AND OTHER SOURCES OF POSSIBLE FUTURE FUNDING OF THE CLEARINGHOUSE BE ADDRESSED DURING THE PHASE III OPERATION.
APPENDIX

APPRENTICESHIP - Oregon's Best Kept Secret
(A Report prepared by Mary Wendy Roberts,
Commissioner, Bureau of Labor and Industries, July 1988)

National Clearinghouse for Apprenticeship Training
Materials Brochure

Continuation Proposal - Future Project Activities
The Role of Apprenticeship in Meeting the Challenges of Oregon's Changing Work Force

A Report prepared for
Mary Wendy Roberts, Commissioner
Bureau of Labor & Industries

JULY 1988
FIPSE PROJECT

In 1986, Lane Community College was awarded a three-year grant from the Fund for Improvement of Post Secondary Education. The purpose of this grant was to establish a clearinghouse for apprentice related training materials. According to Carl Horstrup, Apprenticeship Coordinator at Lane Community College, "a computerized data base, accessible by modem, will be the major component of the clearinghouse." The system will also contain full-text microfiche of each item in the clearinghouse. Once users have selected out potential materials by computerized search procedures, they can order microfiche for in-depth review of specific documents. A third component is the printed materials library that allows users to order direct from the clearing house.

This project will search out quality training materials from all states and Canadian provinces. During this search process, an assessment of apprenticeship curriculum needs will be made and curriculum gaps defined. After instructional analysis, a list of needed modules or units of instruction will be recommended to other states for developmental purposes.

Once the clearinghouse is established, its continuation will be funded by user fees. Provisions for updating the clearinghouse materials have been planned. Review and updates of materials will be made annually.

Outcomes for this project include increased availability of quality materials, expanded apprenticeship training, cost-effective materials, up-to-date materials, time savings for curriculum planners, and a partial solution to the low enrollment problem in apprenticeship.

This project is organized into three phases: development, field test, and dissemination. A three year effort is projected for completing the activities of the project plan.
A third party evaluator will evaluate the processes, products, and impact of this project during the three year time frame. Evaluation findings will be utilized to make on-going modifications in the project plan (taken from an abstract of Horstrup's FIPSE plan, October, 1985).
LOCATE APPRENTICESHIP RELATED TRAINING MATERIALS FOR...

- General Apprenticeship
- Construction Trades
- Culinary Trades
- Electrical Trades
- Graphics Trades
- Heavy Equipment Operators
- Mechanics Trades
- Medical Trades
- Metals Trades
- Plumbing, Pipefitting and Steamfitting Trades
- Miscellaneous Trades
- Private and Semi-private Vendors

through the NATIONAL CLEARING HOUSE for APPRENTICESHIP RELATED TRAINING MATERIALS in Eugene, Oregon, USA
THE CLEARING HOUSE OFFERS:
- Curriculum guides
- Course outlines
- Instructional modules
- Teaching materials and processes

CLEARING HOUSE SERVICES:
- PRINT
  ...a directory presenting apprenticeship related training resources
- DATA BASE
  ...electronic search and retrieval of apprenticeship related materials
- DESIGN AND DEVELOPMENT
  ...support for processes for design and development of curriculum material
- RESOURCE FORMATS
  ...bibliographies, descriptions and ordering information.

MATERIALS CATALOGED:
- General Apprenticeship
- Construction Trades
- Culinary Trades
- Electrical Trades
- Graphics Trades
- Heavy Equipment Operators
- Mechanics Trades
- Medical Trades
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