
Assessing Basic Skills in Workplace Literacy Programs

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With the release of the results of the National Adult Literacy Survey (Kirsch, Jungeblut, Jenkins, & Kolstad, 1993) much national attention is now focused on the need to upgrade literacy skills among adults as well as continue learning throughout life. Although the limitations of standardized, norm-referenced testing have been discussed and recognized in assessing literacy skills (Lazar & Bean, 1991; Tierney, Carter, & Desai, 1991), these tests continue to be widely used (Ehringhaus, 1991). Even in workplace/workforce literacy programs where they seem particularly inappropriate because they have not been developed for the functional context of the workplace, standardized achievement tests are being used to evaluate impact (Sticht, 1991).

Assessment in workplace literacy programs must meet the unique needs of every stakeholder—learners, unions, management, and literacy providers (Askov, 1993). While learners may find portfolio analysis (Tierney, et al., 1991), alternative assessments (Lytle & Wolfe, 1989), and participatory approaches (Jurmo, 1991) more meaningful, business/industry management may need hard data to demonstrate program impact and cost effectiveness. Furthermore, literacy providers often need standardized test results to report to the funding agents to show that learners are improving in basic skills. On the other hand, unions tend to be less interested in standardized test scores and more concerned about positive attitudes toward further education and empowerment (Sarmiento & Kay, 1990).

Criterion-referenced, as opposed to norm-referenced, assessments may satisfy the information needs of a majority of the stakeholders. If the assessments are standardized, having established validity and reliability, they may be more useful to management and literacy service providers. They may also be used to demonstrate mastery and learning to workplace literacy students and unions.

Criterion-referenced tests (Popham, 1978) also provide meaningful assessment information by indicating mastery or nonmastery of skills targeted for instruction. Criterion-referenced assessments should focus on the skills—both reading-to-do and reading-to-learn—that were identified as being essential in the literacy task analysis and, therefore, taught in the curriculum, such as job-related vocabulary. Criterion-referenced assessment, therefore, makes sense in providing not only diagnostic information about individuals but also data for program evaluation and accountability.

In addition, many adults training for entry-level jobs don't have realistic expectations of the basic skills required to perform required tasks or know whether their own basic skills are adequate for the jobs they want. By taking specially designed criterion-referenced tests that assess mastery of basic skills in the context of the workplace, students not only learn about their own mastery of essential basic skills but also about the specific literacy skills that are required for a job or job area.

For example, *Daybreak*, a computer-based, criterion-referenced assessment, helps adults obtain or progress in entry-level jobs by assessing related basic skills in a particular job area and diagnosing their strong and weak basic skills. This diagnosis enables the instructor to provide instruction in those weak areas. *Daybreak* can also be used in program evaluation as pre- and posttests and as an indicator of progress to be expected in its instructional counterpart *A Day in the Life...*

Daybreak is designed for adults reading at about 3rd- to 8th-grade levels. The software requires little computer sophistication. Adult learners can run through the program on their own after a few minutes of instruction on the use of the computer. The courseware is job-specific; it allows adults to assess their basic skills in the context of the job area they wish to enter. Because every job cannot be analyzed for the detailed basic skills required, the courseware addressed an array of job-related basic skills, targeted at under-prepared adults who have entry-level jobs or who aspire to entry-level jobs. The five occupational areas the courseware addresses are: food service, health care, maintenance, retail trade, and clerical support.

Through computerized examples of problems workers encounter on the job, learners can explore the job area they wish to enter as well as assess their basic skills in the context of that field. Explanations are given immediately for incorrect answers, providing opportunities for learning during the assessment. Graphics relevant to the current question are used.

Daybreak assesses the following basic skill areas:

- Reading

Daybreak assesses the learner's interpretation of forms, notes, and memos in the context of a job task. For example, a learner must read a memo and answer specific questions about it to complete a task.

- Writing

Writing is stressed through the completion of job forms, notes, and memos (see Figure 1). Free-response questions also give the learner an opportunity to write.

- Math

Daybreak gives learners math tasks that are common in the workplace. For example, the learner must calculate the change needed for a bill (see Figure 2).

- Problem Solving

The learner must apply problem-solving strategies to accomplish a task. In one task, for instance, the learner must read an inventory list and decide which items to order to restock a supply room.

File Edit Help Map Repeat

DIRECTIONS: Here is information from a phone call. Record the message on the form by dragging the right information to the right place on the form. Click on the DONE button when you are done.

You take a message. Your name is Sarah Shields. Mr. Jones just called Ms. Hoffman about a meeting.

Mr. Jones can't make the meeting on Friday. Please call back.

9/25 10:30PM Sarah Shields
Ms. Hoffman

Click on the DONE button after you have placed all the information.

To: _____
Date: _____ Time: _____
Message: _____

Signed: _____
Your name/title

Done

Figure 1. Completing a Telephone Message Form

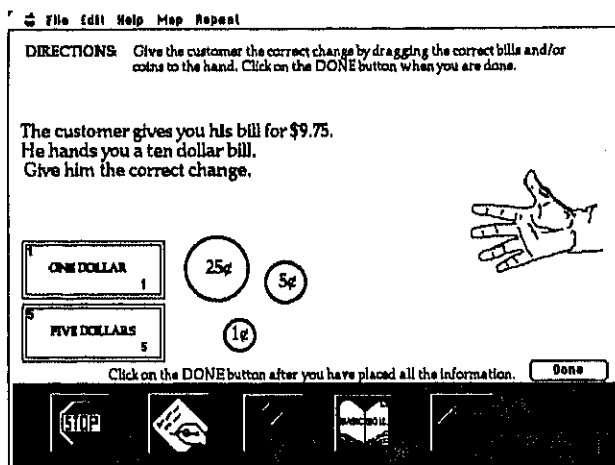


Figure 2. Making Change

Two modes of assessment are possible: *Learning* where the learner is dynamically allowed to change his/her answers based on learning during the assessment and *Test* where the assessment is used for program evaluation or measurement at one point in time. Used in *Learning* mode, where the student has the opportunity to change his/her answers based on learning from the items, assessments can also instruct learners.

Either mode—*Learning* or *Test*—can be selected by the instructor for individual adult students. The computer records students responses to criterion-referenced assessment items in easily accessible printed reports or on a screen display.

Daybreak also includes a word processor which the student can access at any time by a pull down menu button. The software also asks learners to write a sentence or two at the beginning of each unit to recall and use prior knowledge about the content. These learner-generated free responses can be printed or shown on a screen display for the instructor to analyze holistically.

Daybreak is being validated by correlation with the *Tests of Adult Basic Education* (TABE) during field testing primarily in Illinois and Pennsylvania. Reliability is being established through determining internal consistency. Results of the field testing will be reported at a later date. (*Daybreak* was developed and pilot tested by the Institute for the Study of Adult Literacy at Penn State University. Currently, 14 field sites are using *Daybreak*. It will be distributed by Curriculum Associates, Inc.)

Since the instructor is able to elect in which mode the assessment will be used, it can be a powerful and flexible tool in adult and workplace-workforce literacy programs. It puts control of assessment in the hands of the teacher and learners. Learners, when asked how they like *Daybreak* as a test, usually respond that it is not a test. Because it will be standardized at the completion of field testing, it does provide a valid and reliable assessment device for student diagnosis and program evaluation in workplace/workforce literacy programs. It is a more realistic assessment of basic skills than norm-referenced tests because it encourages students to draw on their prior knowledge in answering questions rather than trying to create "culture free" tests which assume no background knowledge. A recent publication from the U.S. Department of Education, Office of Educational Research and Improvement, states that assessment practice is moving toward creating "authentic assessments—appraisals that account for critical aspects of reading and that parallel everyday reading tasks" (Sweet, 1993, p. 12). *Daybreak* offers both standardization and authenticity as a new application of criterion-referenced assessment.

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