Peer Tutoring in Vocational Literacy Skills

Gordon Nore

This article provides an overview of the first year's operation of the Frontier College/Learning in the Workplace (LWP) project. Operating under a contract with the Innovations Branch of Canada Employment and Immigration Commission (CEIC), LWP's mandate is to develop industry-specific training materials and model programmes that can be used to help employees develop the literacy skills needed to function in the changing workplace. One component of Learning in the Workplace is the use of peer tutors who meet with co-workers who are interested in improving their skills. This paper is concerned with showing that the peer tutoring model is a useful component for identifying and meeting worksite literacy needs of non-native speakers.

Learning in the Workplace (LWP) is a project of Frontier College, and is funded, for a period of three years, by the Innovations Branch of Canada Employment and Immigration Commission (CEIC). LWP is concerned with enabling employees to meet the growing literacy demands placed upon them in their workplace. Under the contract with CEIC, LWP will establish a minimum of five pilot sites in two provinces over the three-year period. As one component of the LWP projects, tutors are recruited from within the companies to assist co-workers with literacy and English as a Second Language skills; tutors meet with learners, individually or in small groups, on the job site, sharing the time with their employers.

Drawing on experience gained from the pilot sites, Frontier staff will develop packages of industry-specific training materials and programme models that can be adapted to a variety of workplace settings. These will facilitate the training of personnel within companies to assess the need for, and establish and maintain their own in-house learning projects.

The project began in January of 1988 with a three-month review of the existing literature on workplace delivery mechanisms. At the time of this writing (month 18 of 36) Learning in the Workplace programmes have been operating on two pilot sites, one in Toronto's east end and one in Brampton, Ontario. (Needs assessments are currently in progress on two other sites). This paper focusses primarily on the activities of the first site. It includes an overview of the changing nature of literacy in the workplace. I wish to show that the peer tutoring model which we have been using is

an effective means of (1) helping to define the literacy needs of people in the workplace and (2) developing strategies to meet those needs.

Background on Workplace Literacy

The three-month literature review focusses, in part, on research concerning workplace literacy and ESL in the Workplace (EWP) programmes. The following assumptions held by Frontier staff were investigated:

(1) that learners would be more likely to retain work-related literacy skills when instruction included actual workplace reading materials; and,

(2) that some learners in the workplace, particularly non-native speakers of English, might first require instruction in everyday communication tasks—that is to say, communication tasks that might not appear work-related—to facilitate learning work-related language and literacy tasks.

Thomas Sticht's studies of literacy requirements for the US armed forces supported the former assumption. Sticht's assessment of literacy training programmes for US military personnel revealed that Air Force trainees, upon being retested eight weeks after completing a classroom training course "retained 80% of their end-of-course gain in job literacy training, and only 40% of their end-of-course gain in general reading." (Sticht, 1982) An argument can be made from this that job-related literacy skills are more likely to transfer from classroom to job when training is based on actual job materials.

Jill Bell's work on curriculum design for EWP students at Levi-Strauss supports the latter assumption. Bell surmised that students' progress in workplace language needs was enhanced by learning everyday communicative tasks, such as greetings and leave-takings. Acquiring these skills, she suggested, would promote students' confidence in their ability to learn, and help them interact more freely with co-workers. (Bell, 1982)

The literature review also revealed the differences between workplace literacy skills and traditional school literacy. In North America, the average blue-collar worker has a daily on-the-job reading requirement of 97 minutes, more than the average high school junior even when homework time is included. (Diehl and Mickulecky, 1980). Apart from the time spent reading, Diehl and Mickulecky have also shown how workplace and school reading skills differ in practice. Eighty percent of school reading is *reading to learn*—the acquisition of factual information to answer questions, prepare for examinations, write essays or take part in classroom discussions. In contrast, eighty percent of workplace reading is *reading to do*. (Diehl and Mickulecky, 1980). Workers in manufacturing plants, for example, must read blueprints, dockets, hazardous materials labels, memos, notices on bulletin boards and time cards. Workplace reading

tasks are done sporadically, a few seconds or minutes at a time. punctuated by numerous interruptions: oral instructions from a supervisor, telephone calls, buzzers or bells signalling shift changes or breaks, and even new materials to read. Workers involved in volunteer activities such as a Health & Safety committees and Quality Assurance Groups require the literacy skills, for example, to conduct a meeting. They must be able to take minutes, decipher correspondence and document their actions in oral and written reports.

The review also included the problems associated with conducting literacy needs assessments of employees in companies. Getting potential students to identify workplace literacy needs is no easy task, particularly for non-native speakers of English who are frequently amenable to any instruction that is provided. (Bell, 1982) However, there is clear evidence that involvement of a variety of individuals and groups in the workplace in determining the direction and scope of a programme is essential to designing the curriculum and sustaining the teaching/learning process. (Drew and Mickulecky, 1988).

Implications for Non-native Speakers

Non-readers who are native speakers of English may consult with co-workers, or even family and friends when they need to perform challenging literacy tasks in their workplace. Non-native speakers lacking in communicative skills may not have access to this resource. Similarly, while verbal instruction may be used to supplement printed training materials for the native speaker, the ESL speaker is, once again, left without means to receive, interpret and act upon information in order to perform job tasks safely and productively.

One example of a challenging literacy task is the application of federal Bill C-70, a package of legislation requiring employers to ensure that workers are adequately apprised of safety requirements in their workplace. (OHSEA, 1988) This package includes the WHMIS (Workplace Hazardous Materials Information System). WHMIS consists of:

- Eight pictograms detailing specific hazards, such as *bio-hazardous infectious*
- Ten pictograms outlining personal protection against these hazards, such as protective clothing
- A colour-coded chart describing the nature of the hazard, such as *fire* or *health*
- A scale rating the severity of the hazard from 0 to 4

Under the legislation it is the responsibility of the employer to ensure that all materials entering, being used within, and leaving the workplace

are properly labelled with the above information. The printed training material for workers is formidable. It consists of six books totalling approximately 120 pages of text and accompanied by test sheets for each module. Topics covered in the series include *Information Delivery, Occupational Health, Control of Hazards* and *Legislation*. (OHSEA, 1988).

It is the legal responsibility of the worker to report any infractions of the legislation, which is, in itself, a delicate communicative task. This also raises an interesting point about what constitutes a "literate" worker. On one level the worker protects himself and his co-workers by being able to recognize the correct use of the labelling system. On another level, the worker does this also by being able to identify—and report on—those areas in which the system is being used incorrectly, or not at all.

Establishing the projects

Under the agreement with the Innovations Branch of CEIC, Frontier College would establish the pilot sites with a view to turning their operation over to the host companies once programmes were up and running. Learning in the Workplace staff would then be available on a consulting basis. To facilitate this transition to management of the programme it was necessary to have the ongoing support and involvement of people within the companies.

Allanson Manufacturing, in Toronto's east end, was the first site to approach Frontier. Allanson is an operation of about 325 people on the plant floor. They manufacture electrical components, such as ballasts for fluorescent tubes, battery chargers and transformers. The majority of employees at Allanson are middle-aged women who immigrated to Canada from Italy or Greece. Many left school early to help with household chores. Most were married and had their first children by the time they came to Canada. Few have had any schooling since. Most say that they have no time, as days are spent working at the plant, and nights are spent caring for their families.

Frontier College staff recruited students and tutors voluntarily from the site. Information sessions about the programme were held for employees at a variety of levels: senior managers, group leaders, supervisors and entry-level workers. Meetings of volunteer groups within the company, such as the health and safety committee and the shop committee, were also attended by Frontier staff. Through these, the first volunteer students and tutors were identified. They also assisted in recruiting additional participants and identifying areas of need for students. Many of these early supporters would later form the nucleus of a Learning Committee to administer the project from within the company.

Learners were interviewed privately and confidentially and asked to

identify areas of interest with regard to second language literacy. Since students and tutors would contribute one thirty-minute lunch period with the company paying for an additional half-hour, learners were free to identify both personal and workplace interests. Learners were somewhat sketchy about the latter, so it became necessary to consult with others in the company.

Allanson's management, for example, was concerned about its employees' ability to adapt to rapid changes in the company's manufacturing processes. In addition to upgrading its technology the company was sponsoring an employee involvement programme. Such programmes place workers in groups to set goals, define how best to meet these goals, document progress and trouble-shoot. The management at Allanson felt this would ultimately reduce both the ratio of supervisor to employee and thus the amount of direct supervisory time. (Mark, 1988)

One observable component of this change in literacy requirements at Allanson was a plan to teach every employee to decipher a Bill of Materials. A Bill of Materials (BOM) is actually two documents: a blueprint with manufacturing instructions, and a parts list. Previously, only a handful of supervisory personnel were required to read BOM's.

Training the Tutors

Tutors were trained in a day-long session in Frontier College's SCIL (Student Centred Individualized Learning) approach to literacy education. SCIL was conceived as a re-entry point for adults, both native and non-native speakers, who could not—or did not choose to—participate in conventional instructional programming. (Carpenter, 1983; Forest and Kappel, 1989). Tutors were instructed to work with their students in defining specific learning goals, related to work and to personal interest. Tutors were also supplied with a copy of the Frontier College Tutor's Handbook which outlines the SCIL model and provides practical tips on teaching reading, writing and math. A specially prepared workplace tutor guide (unpublished) was also supplied. The guide suggested reading and writing tasks that could be applied to workplace materials.

Tutors also brainstormed for materials within the workplace that might be of interest. Following are some examples:

- Making drawings of students' work areas labelled with the necessary vocabulary
- Doing plant walkabouts to study safety signs
- Roleplaying to practise English needed for conversation with co-workers and supervisors
- Disseminating information about company projects and volunteer activities within the company

In addition to these, students identified a number of work-related tasks that they wanted to pursue:

- Filling out company forms
- Participating in volunteer projects in the company
- Writing notes to supervisors
- Reading computer manuals
- Making written contributions to the employee suggestion plan

Students and tutors also proceeded with their personal agendas. While these are not the focus of this paper, the following is a brief listing:

- Reading to children, or participating in children's schooling (eg. attending PTA events, helping with children's homework etc.)
- Banking and paying bills independently
- Reading the newspaper
- Reading recipes
- Reading at church or community events
- Writing letters and notes to friends and family

Students and tutors were matched one-on-one and in small groups called learning circles. The criteria for matching included finding a tutor who expressed interest or expertise in an area in which a student wanted instruction. Where more than one learner (maximum three) were placed with a tutor, efforts were made to draw learners from different areas of the worksite. In so doing, no one work area was stripped of personnel at a given time. Occasionally personality conflicts arose, and learners and tutors had to be re-matched. In all 15 tutors were matched with 45 students. Another 20 students were on a waiting list. Many of these were later matched with tutors when participants left the programme or the company. Given the overwhelming majority of non-native speakers at Allanson, only three learners were native speakers of English; their work is not included in the discussion of findings that follows.

What we learned

Clearly, peer tutoring yielded positive results. In exit interviews, usually after three to six months, many students and tutors reported that they were satisfied with the tutoring process, but felt that they learned what they had intended and that it was time to move on. Company personnel reported that many learners were more confident in their interactions with supervisors and co-workers. A handful of students decided to go to night school to improve their English. Some wrote letters of thanks to their tutors and to Frontier College staff. Also, a number of tutors reported that the experience helped them better relate to non-native speaking co-workers. Senior management at Allanson formally acknowledged the work of participants

in the company newsletter. While this was quite gratifying for Frontier staff and the participants, the question remains: Was the peer tutoring component successful in helping people improve their workplace literacy skills?

Workplace related literacy skills were enhanced where there was support from within the company. For example, the personnel department identified forms and documents that learners might find difficult. This information was disseminated through the Learning Committee and was used in tutoring sessions.

Issues not addressed

At the same time, however, certain manufacturing concerns such as reading Bills of Materials were not explored in depth. This was a relatively new project for the company. Thus personnel who were informed in these areas, such as manufacturing engineers and drafters, did not have input into the Learning Committee. Also, since many of the learners working on the shop floor had never seen these documents, they could not possibly have been able to identify learning how to read them as a goal. Similarly, tutors, who were largely new to the material, did not feel comfortable using it in sessions. However, this gave Frontier staff the opportunity to explore other ways of meeting learners workplace literacy needs besides direct instruction with a tutor.

Clear language and design

The Bills of Materials, written originally for personnel with training or experience in engineering, contained jargon familiar to that discipline. Sentences were quite long. A Frontier College trainer worked with Allanson personnel to simplify manufacturing instructions. A list of guidelines for writing was prepared which included the following:

- Unnecessary technical jargon was eliminated from the training.
- All necessary terminology was explained in context.

Consultation with in-house trainer

Existing training in Bills of Materials depended largely on printed materials. A Frontier College trainer worked with the BOM trainer to help make the instructional process and materials more accessible to non-native and native speakers who had difficulty with reading and writing. The trainer was encouraged to use actual parts in the training so that learners could see not only the parts number and name, but also the physical object they represented.

Needs assessment

The experience also helped us refine our needs assessment process. Tutors, learners and senior managers did not include such tasks as deciphering blueprints as a *literacy* or *language* need for employees. We are now asking personnel to identify *training* or *learning* needs with regard to health and safety or productivity. In this way, Frontier staff can assess the language and literacy components of those learning needs, and determine what support Learning in the Workplace can provide.

Conclusion

The literacy demands facing people in the workplace are unique and complex. The changes in occupational literacy requirements at Allanson described in this paper represent only a fraction of the demands facing Canadian workers. The declining need for manual labour is being matched by an increasing need for entry-level employees who can read, write and compute at unprecedented levels. By the year 2000, seventy percent of jobs will require the ability to read and write at the post-secondary level. Currently, as few as 2% of all jobs require no reading or writing at all (Diehl and Mickulecky, 1980). Instruction in writing resumes, filling out job applications and giving employment interviews is no longer sufficient vocational preparation for ESL learners, even those who report that they "just want a job." At the same time, however, many second language instructors in community-based programmes may not see it as their role to instruct learners in the reading blueprints, interpreting health and safety information or writing production plans.

Peer tutoring and peer support of non-native speakers can, I believe, help to bridge this gap. While peer tutors at Allanson were not able to meet all of the literacy needs of their non-native speaking co-workers, some gains were reported. Also, while peer instruction may not have been suitable for other potential learners at Allanson, tutors and students were able to identify to us those areas of need that they could not meet without additional support. Even in those areas, however, personnel within the company working with Frontier staff were able to devise strategies to meet the literacy needs of non-native speakers. This is not an argument for not using trained professional instructors to teach literacy in the workplace. However, given the preponderence of increasingly technical and complex vocational literacy skills that are required of the work force, EWP educators may wish to look to alternative strategies, such as peer tutoring and in-house support, to determine learners' needs and design a curriculum which is responsive to those needs.

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