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ABSTRACT

For nearly 3 years, the Massachusetts Career Development Institute provided a workplace literacy program for 201 persons employed by the Geriatric Authority of Holyoke, Massachusetts, a major nonprofit nursing home and rehabilitation facility. The literacy program included adult basic education, English as a second language, and high school equivalency educational units. The program also provided ongoing educational and career adjustment counseling, motivational sessions, and pre- and posttesting to establish initial functional levels and determine improvements in workplace literacy and productivity. Employees who participated in the program increased their English language reading abilities by more than two grade levels. The program also obtained a 100 percent pass rate in employee participants who qualified and took the Nurses Aide examination, and a 75 percent pass rate in employee participants who took the high school equivalency exam. In addition, participants improved self-esteem and attendance and were less likely to leave the organization. (Contains 20 tables.) (KC)

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ED 426 199

UNITED STATES DEPARTMENT OF EDUCATION  
OFFICE OF VOCATIONAL AND ADULT EDUCATION  
NATIONAL WORKPLACE LITERACY PROGRAM

GERIATRIC AUTHORITY OF HOLYOKE  
WORKPLACE LITERACY PROJECT  
FINAL EVALUATION REPORT  
OCTOBER 31, 1997

SUBMITTED BY

THE MASSACHUSETTS CAREER DEVELOPMENT INSTITUTE  
SPRINGFIELD, MASSACHUSETTS

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Massachusetts Career Development Institute  
Holyoke Geriatric Authority  
National Workplace Literacy Project  
Project Evaluation Report  
For the Period Ending  
July 31, 1997

I. INTRODUCTION

The national workplace literacy program was initially authorized under Public Law 100-202. Current literacy programs have been authorized and federally funded through amendments to the Adult Education Act. The federal regulations provide "assistance for demonstration projects that teach literacy skills needed in the workplace through exemplary education partnerships between business, industry, or labor organizations and educational organizations." (Federal Register, Vol 54, No 159, p.34418)

The Massachusetts Career Development Institute, Incorporated (MCDI) developed and provided a program of Workplace Literacy for two hundred and one (201) individuals during the November 1, 1994 to July 31, 1997 project period. This was the final round of funding for this program. The participants were concurrently employed by the Geriatric Authority of Holyoke, Massachusetts (GAH), a major nonprofit nursing home and rehabilitation facility. MCDI staff provided English as a Second Language, Adult Basic Education, and High School Equivalency Preparation (GED) instructional programs which focused on language, communication, cognitive processes, and content knowledge needed to function effectively and productively in the workplace.

The MCDI staff also provided ongoing educational and career adjustment counseling, motivational sessions, and pre and post testing to establish initial functional levels and determine improvements in workplace literacy and productivity. This project was a continuation of MCDI's overall response to the problems of functionally illiterate adult workers and other employees whose continued employment and upward mobility is limited by deficiencies in any or all of the following areas: analytical thinking, reasoning and problem solving, listening, speaking, reading or writing, mathematics and specific workplace knowledge.

The following is an overview of the project goals and objectives, the training program, demographics information including trainee characteristics and trainees job characteristics, the evaluation design and evaluation results including the specific goals, measurements and outcome assessments of the MCDI-GAH Workforce Literacy Project for the period ending July 31, 1997. The results of the assessments are provided along with a narrative analysis of the outcomes of the project. Finally, conclusions of project effectiveness and recommendations for future program development complete this external evaluation report.

## II. PROJECT GOALS AND OBJECTIVES

In its initial response to the Department of Education's solicitation for national workplace literacy programs, MCDI in 1992 engaged several businesses and employers pertaining to workplace literacy needs in order to identify a partner which recognized the need to upgrade employees' skills and demonstrated the commitment to implement a program of this nature. The Geriatric Authority of Holyoke (GAH), a public nonprofit

agency which employs approximately 350 people in a range of occupations which serves the allied health and human service needs of the elderly in conjunction with Local 1459, United Food and commercial Food Workers Union AFL-CIO, was determined to be the appropriate partner. This partnership continued throughout the duration of this project.

The project provided educational development skills to GAH employees. Focus of the program was to provide Adult Basic Education, English as a Second Language and High School equivalency (GED) services that were consistent with workplace requirements and job retention or enhancement of upward mobility opportunities. The specific objectives included the following:

- A. Provide appropriate educational services for 100 or more employees during the project period.
- B. Assess all GAH employees who are interested in participating in the program.
- C. Provide each Adult Basic Education or English as a Second Language participant a set of educational experiences that will allow 75% of them to demonstrate a two-grade level increase in basic reading skills.
- D. Provide each High School Equivalency (GED) participant educational experiences that will ensure that 85% of those who take the GED exam will pass it.
- E. Provide appropriate educational experiences to program participants that will result in 85% of those individuals taking the State Nurses Aide License Exam to pass it.
- F. Demonstrate that 85% of the individuals participating in the project have an improved level of self-esteem.

- G. Demonstrate improvement in productivity and/or quality of work by 85% of those individuals participating in this project.
- H. Increased motivation, interest in career, improvement in workplace literacy skills and satisfaction with the educational programs by 85% of the participants.
- I. Development of a successful model of Workplace Literacy education that can be expanded and replicated locally or in other areas of the country.

### III. PROJECT TRAINING PROGRAMS

As the grant recipient, MCDI provided the Geriatric Authority of Holyoke with programs of on-site workplace education. The programs provided included Adult Basic Education, English as a Second Language and High School Equivalency (GED) educational units. In addition, specific job related curricula was further developed and refined along with a specific preparation program for the Nurses Aide. Support services and counseling to assist participants with personal and work adjustment problems, motivation and self confidence, employee responsibilities and career development issues were also provided on a daily basis. Emphasis was placed on dealing with actual or potential problems in a timely and effective manner emphasizing participants' transferable skills and enhancement of career-workplace performance and opportunities.

#### A. Outreach and Recruitment

Recruitment strategies were implemented during planning meetings and small group orientation meetings conducted by union, MCDI and GAH staff. The MCDI staff and program partners were available to answer questions and address concerns which employees may have had. A key component to the outreach and recruitment

effort continued to be to make employees feel comfortable about the need for and importance of upgrading work related skills and enhancing job security and career advancement. Confidentiality surrounding job performance and literacy issues were also considered to be important.

**B. Assessment and Intake**

The initial screening and assessment involved the administration of a battery of tests including the Test of Adult Basic Education and other instruments as appropriate. Upon development of the assessment profiles and the selection of an employee for program services, the MCDI staff developed an individual educational plan (IEP) that outlined the employee's goals, basal educational achievement and the appropriate educational program.

**C. Adult Basic Education**

The MCDI Adult Basic Education program was designed to provide individualized learning to those participants who needed to develop, improve and/or reinforce the basic skills of reading, language and mathematics. Strong emphasis was placed on attitudinal and behavioral development along with classroom training that would result in successful job retention and career enhancement.

**D. High School Equivalency (GED)**

The purpose of the GED program was to prepare appropriate employees to take and pass the High School Equivalency Test in order to improve worker performance and be qualified for promotional opportunities and/or job advancement. Lectures, class discussions and assignments focused on concepts,

ideas and problem solving skills which enabled the employee to think logically, coherently and effectively as well as understand and apply fundamental English, Math and Science skill requirements related to job performances requiring at least a high school education.

#### E. English as a Second Language

Employees whose native language is not English were provided the opportunity to utilize the educational space on-site at the GAH to develop listening and communication skills in English. A variety of educational strategies were utilized by staff including the grouping of various individuals who were studying similar concepts; one-on-one tutoring, group presentations; and the use of computer-assisted instruction (CAI) units for drill and practice as well as reinforcement. The emphasis upon individualized learning through these approaches was most helpful in motivating participants to learn the fundamentals of English communication at his/her own rate.

#### F. Job Related Curricula

The job related curricula was developed to specifically address the work knowledge and skill-based aspects of the specific job requirements of the participating employees. Over thirty-five specific workplace education topics were developed and refined during the project for the participating employees, each with their own competency-based tests. The job related curricula included content for nursing aides-assistants, housekeeping, maintenance and food service positions. Topical areas taught ranged from oral and rectal temperatures, bathing, dressing

and hair care of residents, to bed making, moving and lifting patients, painting and maintenance of facilities.

#### IV. TRAINEE CHARACTERISTICS

As part of the total evaluation process, descriptive data was collected via a trainee and trainee job characteristics data form. Descriptive information on trainee characteristics during this project period includes age, sex, marital status, race, number of dependent children, country of origin, years of education, MCDI program enrollment, and hours of instruction completed. The following tables provide graphic results of this data.

TABLE I  
Age of Trainees

AGE RANGE	NUMBER	PERCENT	N=201
18 - 25 years	28	13.9%	
26 - 35 years	66	32.8%	
36 - 45 years	50	24.9%	
46 - 55 years	43	21.4%	
over 55 years	14	6.9%	

As can be seen from Table I, the majority of the employee participants (86%) were 26 years of age or older. Of these, 6.9% were over 55 years of age.

TABLE II  
Sex of Participants

GENDER	NUMBER	PERCENT	N=201
Males	38	18.9%	
Females	163	81.1%	

Table II indicates the majority of employee participants were women. This was comparable to and consistent with the high ratio of female employees at the Geriatric Authority of Holyoke.

TABLE III  
Race-Ethnic Background

RACE-ETHNIC BACKGROUND	NUMBER	PERCENT	N=201
Black-African American	18	8.9%	
Hispanic-Latin American	54	26.9%	
Asian - Pacific	1	.50%	
White - Caucasian	124	61.7%	
Other	4	2.0%	

The racial-ethnic background of the participants during this project period included racial and cultural minorities reflective of the populations of the Greater Holyoke and Western Massachusetts urban areas although there was a slight increase from previous years. A total of 38.30% of the participants were of a racial-cultural minority as compared to 34.04% in the most recent year preceding this project period.

TABLE IV  
Marital Status

STATUS	NUMBER	PERCENT	N=201
Married	120	59.7%	
Single	70	34.8%	
Divorced	10	5.0%	
Widowed	1	.50%	

TABLE V  
Marital Status by Sex

STATUS	NUMBER	PERCENT	N=201
Married Male	13	6.5%	
Single Male	22	10.9%	
Married Female	108	53.7%	
Single Female	47	23.4%	
Divorced Male	3	1.5%	
Divorced Female	7	3.5%	
Widowed	1	.5%	

Tables IV and V identify the marital status and marital status by sex as reported by employee participants. The majority are married (66.2%) and female (60%). Single females constituted the next largest group (23.1%).

TABLE VI  
Dependent Children

DEPENDENTS	NUMBER	PERCENT	N=201
No. Dependents	68	33.83%	
At least one dependent child	18	8.96%	
Two or more children	41	20.40%	
Three or more children	9	4.48%	

As can be seen from Table VI, approximately one-third (33.83%) of the participants have at least one dependent child. A total of 50 (24.88%) have two or more dependent children.

TABLE VII  
Country of Origin

COUNTRY	NUMBER	PERCENT	N=201
United States	151	75.1%	
Caribbean	37	18.4%	
Europe	7	3.5%	
Asia-Pacific Islands	3	1.5%	
Other	3	1.5%	

While Table VII shows the majority of the participants were born in the U.S., it would appear, given the race-ethnic background data in Table III, that at least some are first generation. In addition, 50 or 34.9% immigrated to the U.S.

TABLE VIII  
Years of Education

YEARS	NUMBER	PERCENT	N=201
Less than 4 years	1	0.50%	
4 -- 6 years	5	2.5%	
7 -- 9 years	25	12.4%	
10 -- 11 years	56	27.9%	
12 years or more	114	56.7%	

More than half (56.7%) of the participants reported having at least the equivalent of a completed high school education. While 56 or 27.9% reported at least 10 to 11 years of formal education, 31 of 201 (7%) did not either enter or complete courses at the secondary level. It is unclear as to whether or not some for cultural or other reasons may have over reported their education.

TABLE IX  
Enrollments in MCDI Workplace Literacy Programs

PROGRAM	NUMBER	PERCENT	N=201
Job Related Curricula /Work Experience	160	79.60%	
Adult Basic Education	26	12.93%	
GED	4	2.00%	
English as a Second Language	11	5.47%	
Other (LPN/CNA)	0		

\* Two employees participated in more than one program.

The majority of the employees, were enrolled in the specific job related or workplace curricula. However, as indicated in Table IX, the need for other areas of training especially Adult Basic Education as it relates to the participant's job, was also strong.

**TABLE X**  
**Total Hours and Average Hours of Instruction Completed**

CATEGORY	TOTAL HOURS OF INSTRUCTION	AVERAGE PER PARTICIPANT	N=183
Job Related Curricula	29110 HOURS	159.1 HOURS	
Adult Basic Education	1785 HOURS	162.3 HOURS	
GED	1909 HOURS	159.1 HOURS	
English as a Second Language	960 HOURS	160 HOURS	
Other (LPN/CNA)	0 HOURS	0 HOURS	

The majority of the participants completed an average of 160 hours of instruction in the ABE, and ESL programs and 159 hours of applied instruction in the Job Related Curricula.

#### V. TRAINEE JOB CHARACTERISTICS

As a part of the demographic data collected, the job characteristics of each of the trainees were identified in terms of job titles, full or part-time employment, years of employment, second job or other employment and average hourly wage. The following tables provide the resulting information.

TABLE XI  
Job of Participants

JOB TITLE	NUMBER	PERCENT	N=201
Medical Worker/CNA	104	51.74%	
Nursing LPN/RN	21	10.45%	
Social Services/ Activities/Rehab	18	8.95%	
Cook/Food Service Worker/ Dietary Aid	9	4.47%	
Housekeeping	18	8.96%	
Maintenance	12	5.97%	
Administration/Office Worker/Clerk	19	9.45%	

The majority of participants for the workplace literacy project were employed within medical services and nursing departments at the Geriatric Authority of Holyoke. In addition, there were participants from the housekeeping, maintenance, food service, activities, and administration/office services.

TABLE XII  
Employment Status

STATUS	NUMBER	PERCENT	N=201
Part Time	5	2.49%	
Full Time	196	97.51%	

TABLE XIII  
Years of Employment

YEARS	NUMBER	PERCENT	N=201
Less than 6 months	9	4.48%	
6 - 12 months	9	4.48%	
1 - 2 years	43	21.39%	
2 - 5 years	57	28.36%	
5+ years	83	41.29%	

TABLE XIV  
Additional Employment

SECOND JOB	NUMBER	PERCENT	N=201
Yes	51	25.37%	
No	149	74.13%	
NR	1	0.50%	

As can be seen in Tables XII, XIII, and XIV, the majority of the participants were employed full time, worked an average of 2 to 5+ years in their positions and did not have a second job. However, it is also significant to note that 30% were employed two years or less and 21% were employed 1-2 years with over 25% holding a second or additional job.

TABLE XV  
Range of Hourly Wages

HOURLY RATE	NUMBER	PERCENT	N= 201
\$5.00 - \$5.99	1	.5%	
\$6.00 - \$6.49	2	1.0%	
\$6.50 - \$6.99	5	2.5%	
\$7.00 - \$7.49	11	5.50%	
\$7.50 - \$7.99	22	11.0%	
\$8.00 - \$8.49	42	21.0%	
\$8.50 - \$8.99	39	19.4%	
\$9.00 - \$9.49	23	11.4%	
\$9.50 - \$9.99	10	5.0%	
\$10.00 - \$10.49	8	4.0%	
\$10.50 - 10.99	3	1.5%	
\$11.00 - \$11.49	8	4.0%	
\$11.50 - \$11.99	2	1.0%	
\$12.00 +	25	12.4%	

Table XV indicates the range of hourly wages of the participants. The highest percents were in the \$8.00 - \$8.49 and \$8.50 - \$8.99 range which is also reflective of the demand for highly skilled employees at GAH (especially in such positions as nurses assistant and medical services) and the number of months/years of employment at GAH.

## VI. PROJECT EVALUATION DESIGN

The Massachusetts Career Development Institute and Geriatric Authority National Workforce Literacy Project evaluation design followed the overall recommendation of Thomas G. Sticht, author of Evaluation National Workplace Literacy Programs (April

20, 1991) and MCDI's overall evaluation format. For this evaluation it was also requested that the evaluation incorporate any additional data on the following: Non-completion students if any, what are they doing now? Literacy gains, student evaluations, attendance and job retention, self-esteem, and behavioral changes in job performance and results.

In addition to the descriptive data collection on the characteristics of the participants and the participant's jobs presented in the previous sections, the evaluation design incorporated measurements and outcome assessments in two major categories, Literacy Abilities and Work Productivity Indicators.

#### A. Literacy Abilities

Literacy abilities that were to be assessed included:

1. English Language Communication Abilities including listening, speaking, reading and writing skills.
2. Cognitive Processes including reasoning and problem solving abilities.
3. Content Knowledge including math skills, workplace, community and/or social knowledge related to functioning in the workplace.
4. Secondary Education leading to a High School Diploma or Equivalency (GED).

#### B. Work Productivity Indicators

Work productivity related indicators to be assessed were:

1. Ability to converse with supervisor, co-worker on job related instructions or directions, ability to read and write job materials, and general employment characteristics.
2. Attendance, work performance, productivity and job retention.

In order to measure literacy abilities and work productivity related to the MCDI-GAH Workforce Literacy Project measured outcomes for each category were identified.

#### C. Measured Outcomes for Literacy Abilities

The measured outcomes for literacy abilities included:

1. A minimum two grade level improvement in 75% or more of the participants as measured by the Test of Adult Basic Education.
2. A minimum of 85% of those eligible to take the GED examination will achieve the High School Equivalency.
3. A minimum of 85% of those eligible who take the State Nursing License Examination will pass and achieve the Nurses Aid License.
4. At least 85% or more will demonstrate average to above average trainee employment characteristics as measured by the student evaluation.
5. At least 85% or more will demonstrate improved self esteem as measured by the modified Self Concept Scale.

#### D. Measured Outcomes for Work Productivity

The measured outcomes for work productivity were identified as the following:

1. At least 85% of Geriatric Authority of Holyoke employees will demonstrate improved productivity and quality of work as measured by supervisors evaluations and employee records.
2. A minimum of 85% or more of the participants will demonstrate the ability to get to work on time and on a regular attendance basis as measured by attendance records.
3. Employment records will demonstrate improved job retention and reduced employee turnover for literacy project participants and graduates.

## VII. OUTCOME DATA AND ANALYSIS OF RESULTS

For one of the outcomes measuring literacy abilities, the pre-screened participants who were determined to be in need of services were administered a pre-test. This test was the reading-comprehension section of The Test of Adult Basic Education. Post-testing utilizing the same test was administered approximately one year later. Table XVI provides a breakdown of the outcomes and results.

TABLE XVI  
Test of Adult Basic Education English Language - Reading Abilities  
Pre-Test and Re-Test Scores

NUMBER/PERCENT PARTICIPANTS	PRE-TEST GRADE LEVEL	RE-TEST GRADE LEVEL	DIFFERENCE
201/176	voc 8.4	voc 10.6	+2.2 26.19%
87.56%	comp 9.3	comp 11.8	+2.5 26.88%
	total 8.8	total 11.2	+2.4 27.27%

As can be seen from Table XVI, all of the participants or 100% were pre-tested at the beginning of the project and re-tested at the end of the project. The participants' vocabulary grade level progressed from a pretest score of 8.4 grade level to a grade level equivalent to 10.6. This was a 2.2 grade level increase during this period. Similarly, the participants improved their reading comprehension grade level from 9.3 to 11.8. This was a 2.5 (26.88%) grade level increase.

In both instances the grade level increases exceeded the two-grade level improvement established as the goal for this measured outcome. It also exceeded the projected goal of 75%, this was mainly due to the entry of many participants during the initial project period and the pre and post testing completions of participants who entered during this second year of the project.

Table XVII provides a breakdown of the next two literacy measured outcomes, namely the successful passing of the High School Equivalency Test (GED) and the Nurses Aide Examination for those participants evaluated as meeting the prerequisite requirements.

TABLE XVII  
High School Equivalency (GED) and Nurses Aide Examinations

EXAM	NUMBER OF PARTICIPANTS	NUMBER PASSED	PERCENTAGE
High School Equivalency (GED)	4	3	75%
Nurses Aide	15	15	100%

During this project, participants of the MCDI-GAH Literacy program were screened and identified for eligibility or qualifications to take the high school equivalency (GED) or the

nurses aide examination (CNA). Three of four or 75% successfully passed the high school equivalency and 15 or 100% passed the nurses aid examination. It should be noted however, that during the 1995 project year, there apparently was a change and upgrade in administrative policy with regard to new hiring practices (also related to facility accreditation and licensing requirements) which established a high school diploma or equivalent and/or certification as a nurse's aide for specific employment positions. This had an impact on the results in this area, although the project continued its primary focus on specific workplace literacy and work performance of these employees and participants of the project.

Developed by the Massachusetts Career Development Institute in partnership with the Geriatric Authority of Holyoke, a Student Evaluation Form was utilized during this project period, in order to assess the outcomes of the basic literacy and work related curriculums. The project participants were evaluated on five core variables related to their job performance and the impact of their literacy educational training program. The five variables were phrased in the form of questions with a rating scale of one (1) to five (5) attached to each. One represented unacceptable performance or no improvement, three (3) represented average performance and five (5) was outstanding or exceptional. The five assessment variables were:

Does the student-employee follow direction better?

Has the student-employee's attendance at work improved?

Does the student-employee understand verbal instructions better?

Has the student-employee's required written work improved?

Has the student-employee's productivity increased?

Table XVIII provides the results of student evaluations on these questions.

TABLE XVIII  
Student-Employee Performance Evaluation

TIME/DATES	NUMBER/PERCENTAGE OF PARTICIPANTS	AVERAGE SCORE
November 1994- October 1996	198 of 201 98.51%	4.293/5 85.86%
November 1995- July 1997	176 of 201 87.56%	4.335/5 86.70%

The student evaluation results indicate that the majority of the student employees achieved an above average to excellent rating as a group average in both the 1995 (85.86% or 4.29 average score out of a scale of 5) and the 1997 evaluation cycle (86.7% or 4.39 out of 5 average score). In addition, the goal of achieving 85% or more of the participants who achieved above average or better ratings was met during the first testing cycle (85.86%) and exceeded during the second testing period (86.70%).

The relationship of self-esteem to literacy abilities and work performance and productivity has been one of the basic premises upon which the Massachusetts Career Development Institute in partnership with the Geriatric Authority of Holyoke, Inc. Literacy in the Workplace Project has been based. The theoretical assumption has been that as literacy skills improved so would work skills, work productivity and as a result enhanced self-esteem would be highly related to both.

In order to assess improvements in self-esteem, a modified version of the Tennessee Self-Concept Scale was applied and utilized during this project period. This instrument included 75

items in which the participant rated their responses in a Likert type scale from a valence of 1 disagree to 5 agree. Scoring was directionally corrected so that the higher the circled responses, the higher the self-esteem score. Only total scores were tabulated. Table XIX provides the results of the testing during this project year.

TABLE XIX  
Modified Self Concept Scale

TESTING GROUP	PRE-TEST SCORE	RE-TEST SCORE	PERCENTAGE DIFFERENCE
	November 1994	July 1997	
N = 101	3.727/5	—	—
N = 149	--	3.9473/5	+5.91%

The results of the pre-test and re-test self-concept scores for both testing groups shows some increase in self-esteem. There was an average increase of 5.91% from 3.727 out of 5 to 3.947 out of 5 for 100 of the participants in the two testing cycles. This is a positive increase though some of the participants' later dates of entry into the literacy program (101 vs 149) provided them with more time in the program which may have had a beneficial effect before retesting.

Attendance and retention were the final two measured outcomes for the productivity indicators which were to be assessed. These were assessed not just in terms of on the job

performance but in terms of attendance and retention in the literacy program as a whole.

Table XX provides the results of the overall attendance and retention rates.

TABLE XX  
Attendance and Retention

FACTOR	PERCENTAGE LOSS	SUCCESS RATE
Attendance	2.776%	97.224%
Retention	12.438%	87.562%

The goal of the project was to achieve a minimum success rate of at least 85% in both attendance and retention. As can be seen in Table XX, this rate was more than met (97.22% in attendance) and exceeded (87.56% in retention). Much of these success rates appears to be highly related to the MCDI-GAH Literacy Project's emphasis and insistence upon staff involvement, concern, empathic understanding and support for each individual participating employee in addition to the state of the economy and the employment retention efforts of GAH.

#### VIII. CONCLUSIONS AND RECOMMENDATIONS

With the completion of this project, the Massachusetts Career Development Institute Literacy in the Workplace program in partnership with the Geriatric Authority of Holyoke Inc. has achieved some significant accomplishments as indicated by the following measured outcomes:

- ◆ Established and implemented a Literacy in the Workplace program of services with clearly defined and measurable outcomes on literacy and worker productivity variables.
- ◆ Provided literacy in the workplace educational services for 201 employees over the project period, a 101 increase over the original project goal.
- ◆ Exceeded an average two grade level increase in English Language -- Reading abilities.
- ◆ Achieved an average 2.4 grade level increase in English Language -- Reading abilities for all of the participant employees.
- ◆ Obtained a 100% success (pass) rate in employee participants who qualified and took the Nurses Aide examination.
- ◆ Obtained a 75% success (pass) rate in employee participants who took the High School Equivalency Exam (GED).
- ◆ Achieved an above average to excellent rating for 85+ % of employee participants on trainee performance variables including ability to follow directions, understand verbal directions, improve written work, attendance and productivity as well as student-employee satisfaction.
- ◆ Improved self esteem by an average of 5.91% for a total group of 149 participants as measured by a modified version of the Tennessee Self-Concept Inventory.
- ◆ Obtained an exceptional attendance rate of 97.22% for the project period.
- ◆ Reduced turnover and obtained a retention rate of 87.5% for the project period.

The MCDI-Holyoke Geriatric Authority Literacy in the Workplace project has clearly demonstrated measured outcomes which positively reflect its success during this project period. The following recommendations are made with the intent of further enhancing and improving upon the demonstrated effectiveness of the project in future programming.

The MCDI-GAH project is to be commended for its vision, program implementation and success in improving literacy in the workplace of its employee participants. Overall improvements as indicated in this report in basic reading and comprehension was excellent. It would be beneficial in future projects of this nature that consideration be given to further evaluating participants in related literacy abilities such as math and problem solving especially as they relate to specific job descriptions and requirements.

The successful accomplishments of the participant who took and passed the nurses aide examination fulfilled a significant workplace need for qualified personnel. As the hiring practices changed, there was less of a need to focus on this aspect of the project. There was however, a continued emphasis on the development of workplace literacy skills in these nurses aide and related positions. It would have been helpful to be able to more specifically assess the changes in hiring practices and their impact on workplace literacy readiness, workplace job performance, promotions, salary raises, etc.

The majority of the participants in this project were in allied health type positions. At GAH, there was a very high need in these positions for the literacy

project and the applied work experience curriculum. The methods and training materials were most appropriate and specific to the needs of these demanding positions. The project also increasingly sought to meet the literacy in the workplace needs of additional employees in such areas as social services, activities, food service, housekeeping, maintenance, and administrative/office work. Future programming should continue to identify and prioritize identified areas of need especially related to workplace literacy and job performance.

The curriculum developed for the MCDI-GAH project appears to have been well-thought out and well oriented to the actual job related tasks and job descriptions at GAH. The publishing of a documented training manual that can be used by others in a train the trainer model is also most useful. This document in addition was made available at the national workplace literacy conference in Milwaukee, Wisconsin and is to be distributed nationally through the ERIC Clearing House.

The project has done well to schedule classes and services which meet the needs of the employer and employee to maintain a required regular work schedule. The project provided a variety of additional workshops and resource material as well as training for GAH staff. This has allowed MCDI and its partnership to establish a Life Long Learning Center with GAH which also serves as a resource to staff and employees. Although the project has officially been completed, a continued relationship which facilitates the GAH staff in taking over the ongoing

workplace literacy needs of its employees would be most beneficial in sustaining the progress that has been made through this partnership.

The student evaluation-employee performance scales were effective, efficient rating forms which were not too cumbersome or complex for the rater to utilize. Consideration should however, have been given to refining or adding to these instruments and the evaluation schedule and timetable to be better able to collect the evaluation data and discriminate levels and areas of new worker skills and improvements in literacy as they related to specific worker tasks, productivity and performance in a rapidly changing and demanding work environment. Independent evaluations from the MCDI instructor and the GAH supervisor completing the same evaluation form independently on each employee participant would have provided greater input and validity to both the literacy in the workplace and related worker productivity factors evaluated.

Record keeping, data collection and case file information were generally hand recorded, maintained in appropriate files and with appropriate confidentiality. Some of the data such as basic intake information, results of pre and post tests might have more efficiently and effectively been stored in a computer data base. In addition, much of the basic education programming might best be computerized and utilized by participants through individualized instruction and utilization of a resource workplace education room or center. Consideration should be given to computerizing both programmatic as well as record keeping case management systems in future projects or programming.

The success of this project appears to have been integrally tied to the close, daily working relationship that has been maintained between the employee, the MCDI instructor and staff, and the GAH supervisors, employer and staff. This positive caring and motivationally supportive environment appears to have been highly correlated with employee improvements in self esteem, as well as the attendance and job retention results. It is strongly recommended that the members of this partnership including the Advisory Board continue to meet to maintain and further develop the successes achieved through this project.

The MCDI-GAH partnership through this project has generated a prototype model workplace literacy program especially in the highly demanding and rapidly changing allied health services fields. There should be further assessment in terms of the successes and best practices of this project in terms of future replication with other geriatric or similar allied health facilities where the unmet health needs of the communities citizens and the literacy abilities of employees or potential employees as related to employment, worker recruitment, productivity and standard of care are a major issue.



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