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Return on Investment for Workplace Education

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RETURN ON INVESTMENT FOR WORKPLACE EDUCATION

Presentation to

PROJECT ALERT

ALL-PARTNERS MEETING AND LUNCHEON

Wayne State University

Detroit, Michigan

by

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A *workplace education* program provides training—separate from regular job activities—in one or more of the following:

Reading and writing English

Mathematics

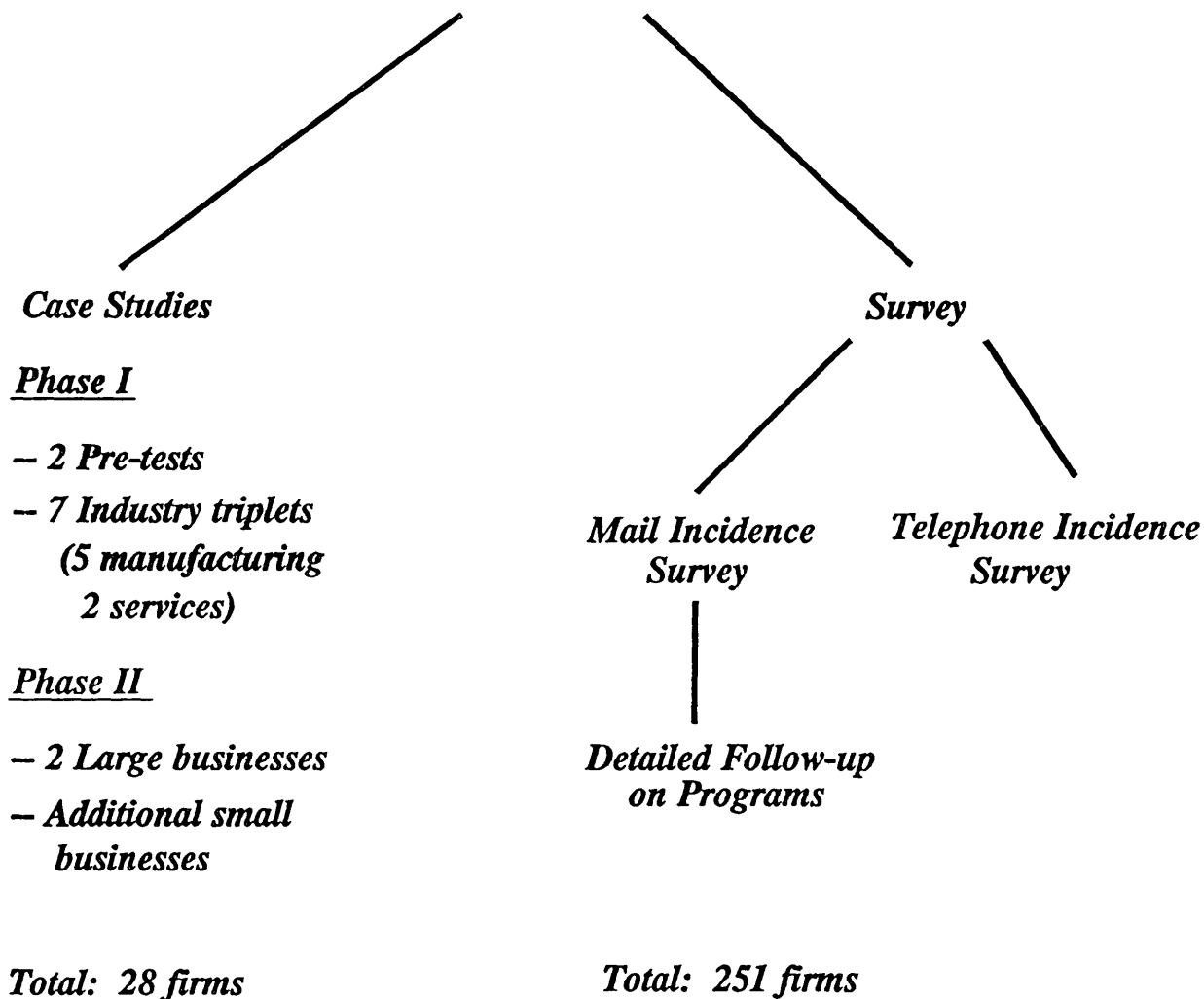
Speaking and understanding English

Problem solving

Interpersonal skills

Such a program may take place at the work site, somewhere else, or a combination of both.

STUDY OF WORKPLACE EDUCATION PROGRAMS IN SMALL BUSINESS IN MICHIGAN



***Note: Excellent representation of firms with programs (DO's)
Good representation of firms without programs (DON'Ts)***

BASIC SKILLS DEFICIENCIES

- Survey:**
- **37% of hourly employees have difficulties in some basic skill**
 - **26% of hourly employees have difficulties in mathematics**
 - **24% in problem solving or interpersonal skills**
 - **14% in reading and writing**
 - **3% in speaking and understanding English**

Case study:

- **Above percentages are probably underestimates because supervisors and employees are aware of workers' problems that are unknown by management**

Note: All of this evidence is based on respondents' perceptions and not on formal assessments.

INCIDENCE OF PROGRAMS

Survey: 22% of firms have a program

Case study: Above is an overestimate. Many firms that claimed to have a program in fact did not; exceptionally difficult to find firms with programs

Summary:

- Less than 5% of firms have a program
- Most hourly employees with basic skills difficulties do not have the opportunity to improve their skills through workplace programs

Note: Incidence is difficult to measure because of response selectivity and because of no uniform definition of what comprises a program

DIFFERENCES BETWEEN DOs AND DON'Ts

Survey	<u>With Program</u>	<u>Without Program</u>
Employment	131**	84
Average hourly wage	9.62	9.18
Training expenditures/payroll	2.8**	0.8
Reorganization of work index	4.04**	2.95
<hr/>		
Turnover index	0.6	0.5
Collective bargaining	22.0	24.6
Profit index	0.0	-0.2

Note: ** indicates difference is statistically significant.

ATTRIBUTES OF PROGRAM

	<u>Incidence Survey</u>	<u>Case Studies</u>
Voluntary	57%	63%
At least partially mandatory	43%	37%
Taught at worksite	82%	75%
Release time given	81%	75%
Instructor		
Company employee	56%	19%
Community college	-na-	56%
Public schools adult ed.	-na-	43%
Included volunteers	-na-	19%
Skills taught		
ESL	4%	13%
Interpersonal skills	67%	19%
Math/measuring	59%	81%
Problem solving	82%	25%
Reading and writing	38%	75%
Standard GED curriculum	20%	19%
Sample size	53	16

Note: **-na-** means not available. Case studies include Phase I and Phase II firms (including 2 large businesses.)

ATTRIBUTES OF PROGRAMS

	Detailed Follow-up Survey	Case Studies
Percent of workforce participating	59.5%	34%
Teaching methods used:		
Individual tutoring	0%	13%
Group instruction	57%	50%
Individualized and group instruction	43%	50%
Computer assisted instruction	43%	19%
Average cost (12 months)	\$14,525	see below
Sample size	14	16

Cost data from case studies:

"\$25K grant plus release time:

"trivial; 1 hour/week release time per employee"

"\$125/participant to provider plus release time"

"\$800 plus release time"

"\$250/participant"

"\$50K grant"

"\$72K grant; \$275/participant plus release time"

"\$13,865 (for 31 participants)"

"\$40,000 in total co. costs."

IMPACTS OF PROGRAMS

Scale:	None	Very	Moderate	Very
	(0)	Little	Amount	Much
		(1)	(2)	(3)

<u>Survey:</u>	<u>Basic Skill Improvement</u>	<u>Mean</u>
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Reading	1.6
Writing	1.8
Math	2.2
English	1.0
Problem Solving	1.8
Communication	2.3

Employee Attitudes/Skills

Work effort	1.7
Company loyalty	1.9
Employee morale	2.1
Independence	1.8
Team work	2.0
Ability to use technology	1.4
Self-confidence	2.3

Company Outcomes

Employee retention	1.0
Absenteeism/lateness	1.1
Advancements	1.4
Worker safety	1.3
Output quality	1.7
Customer satisfaction	1.5
Scrap/error rates	1.3
Productivity	1.2

Sample size	14
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MOTIVATION

Why DOs Do

	<u>Rank in Survey</u>	<u>Rank among case Studies</u>
Improve employee well-being	1	4
Customer requirements/customer relations	2	3
Increased competition	3	3
Decreased workforce skills	3	3
Preparation for other training	4	2
Reduce error rates/scrap	4	3
Subsidy became available	5	1

MOTIVATION

Why DONTs Don't

	<u>Rank in Survey</u>	<u>Rank among case Studies</u>
Basic skills not serious problem	1	1
Not enough staff to manage	2	2
Never considered doing so	3	4
Too expensive	4	2
Need more information	5	3
Not employer's responsibility	5	3
Workers quit after training	6	4

EMPLOYERS

- Looking for "engaged, problem-solving" workers
- Support for workplace education is *broad, but shallow*

WORKERS (UNIONS)

- Looking for economic security, higher wages
- Receiving boosts in self-confidence and self-image
- Support for workplace education is *narrow, but deep*

PROVIDERS

- **Local education agencies and community colleges *plus volunteers***
- **Very capable and very dedicated**
- **Much responsibility left to instructors/volunteers**

3 TYPES OF PROGRAMS

- **LOW INTENSITY**
 - relatively little management involvement
 - relatively few workers
 - literacy tutoring or "off-the-shelf" adult basic education
- **QUICK FIX**
 - intended to solve acute skills problem discovered in process of restructuring
 - involves many workers
 - lots of management involvement
- **LIFELONG LEARNING**
 - both general skills and job-related skills
 - solid management support
 - usually involves an established "learning center"

Table 1
A Benefit-Cost Analysis Framework for Workplace Literacy Training

Benefit or Cost	Perspective				
	Workers	Employers	Rest of Society	Education/ Training Establishment	All
1. Training costs	0/-	-	0/-	+	-
2. (Higher) Productivity	0	+	+	0	+
3. (Higher) Wages	+	-	0	0	0
4. Nonwage compensation (pensions, health insurance, etc.)	+	-	+	0	0/+
5. (Less) Worker turnover	+	+/-	+	0	+
6. Safer workplace	+	+	+	0	+
7. (Higher) Taxes	-	0/-	+	0/+	0
8. (Improved) Self-esteem	+	0	0/+	0	+
Net Benefits	+	-/+	+	+	+/-

Table 3
 Estimates of the Marginal Economic Effects
 from Workplace Literacy Program Participation

Dependent Variable	Population/Model					
	Total Population		Males		Females	
	1	2	1	2	1	2
Percentage increase in annual earnings (from NHES)	16.9*	12.8°	20.8**	19.1**	10.0	1.8
Percentage increase in weekly earnings (from CPS)	11.3**	8.0°	1.4	-4.2	17.1**	14.2**

Note: Entries are coefficient estimates from weighted OLS regressions, expressed as percentages. Full models are reported in table 5. The models in column 1 exclude industry and occupation, whereas industry and occupation dummy variables are included in 2.

- ** Significant at the .05 level.
- * Significant at the .10 level.
- ° Significant at the .15 level.

Impacts of Literacy Training on Productivity Measures

<u>Impact</u>	<u>Percentage of respondents who reported a "moderate" or "significant" impact</u>
Quality of output	51%
Ability to use new technology	51
Error rates	41
Customer satisfaction	35
Time savings	33
Safety	33

Source: Bassi (1994).