

## Why is this Necessary?: Return On Investment in Personnel Assessment

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Embracing New Challenges and New Solutions  
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## Personnel Selection is the Ultimate H.R. Technology

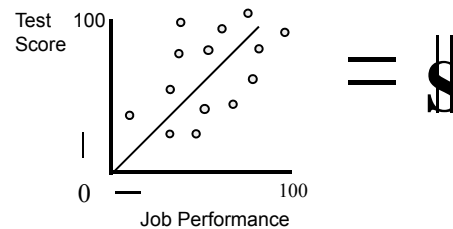
- The purpose of technology (or innovation) is to improve the way we do business: valid hiring tests do this
- Valid selection vs. "Quick and Dirty" = a \$5,000 to \$25,000 advantage
- Fairness and job-relatedness increase access for all persons, staving off favoritism in hiring

## How useful would a tool be that could predict police officer:

- Academy success
- Supervisor ratings of patrol performance
- Overall activity performance
- Serious discipline problems

▪ Michael G. Aamodt, [Research in Law Enforcement Selection](#), 2004

## Impact of Testing



## Return on Investment

- What is it?
- Why should we care about it?
- What is the investment?
- What is the return?

## Return on Investment Involves

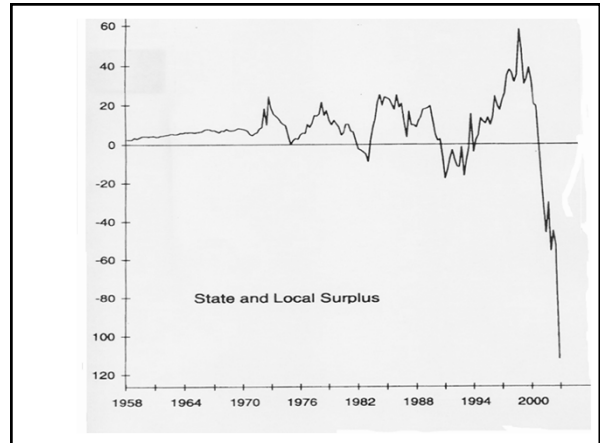
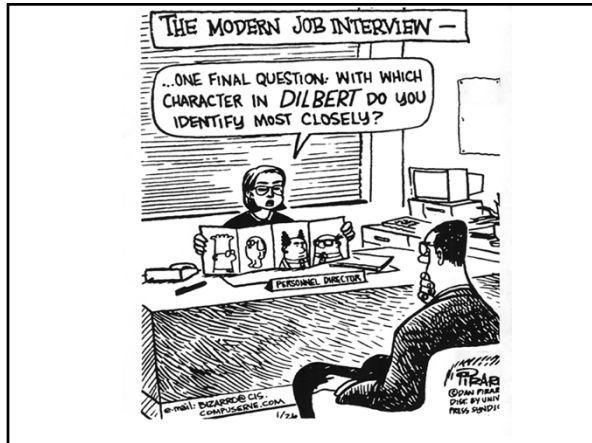
- Investment: buying or doing something with \$
- A process or use for what was acquired
- Tracking of costs to buy
- Tracking of costs to use
- Tracking of outcomes: did it payoff?
- Reporting (proclaiming) the results

### Management May be Dubious About Return on Investment

- Expectancy tables and utility analysis may seem too esoteric to be useful
- Dollar savings or “profits” may seem too large
- Management is often influenced by the slogan of the month (e.g., reinventing government, best practices, better-faster-cheaper)
- At the time, the slogan may seem to make sense (or is it cents? - what currency does it really have?)

### IPMA: States’ Budget Gaps Widen

- Worst Fiscal Outlook since World War I
  - Gaps widening rapidly: 50% jump in two months
  - Estimated \$26 billion gap in just 36 states
- The problem is still worsening
  - Estimated \$69 billion in 2004 in same 36 states
  - Effective solutions have not been readily employed
  - Multiple causes seem resistant to single solutions
- Very few states expecting surplus
  - California has by far the worst problem
  - Most populous states expect large budget gaps
  - Most states expect 2004 to be even worse



### Why We and Management Should Care About Return on Investment

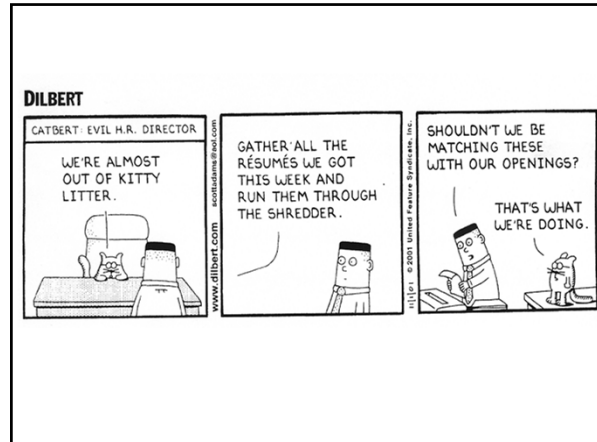
- It makes good business sense
- It makes good professional sense
- It makes for improved customer relations
- Things that are shown to work get rewarded

### Return on Investment Example: Selection for Dispatchers

- 50 positions in work unit
  - Example of one position of turnover caused by dismissal after 10 weeks of training
  - Terminated person would not have been hired if new test had been in place
  - \$20/hour total salary = \$8,000 lost just in salary
  - Cost of testing = \$1,800. So the R.O.I. for this one event is: \$8,000-\$1,800=\$6,200 [potential savings], “gain” or return then is \$6,200/\$1,800 = 344%

### Cost Estimates Using Valid Tests

- \$20 per examinee total cost
- \$10 per examinee in administrative cost
- \$10 per examinee in research, design, and acquisition
- Range in costs
  - ▶ \$1 - \$5 for basic clerical positions
  - ▶ \$10 - \$300 for administrative or technical positions
  - ▶ \$10 - \$500 for supervisory positions
  - ▶ \$200 - \$2,500 for management or executive positions



### Relative Validity of Test Types

•Work sample tests:	.54
•General mental ability tests:	.51
•Structured interviews:	.51
•Job knowledge tests:	.48
•Assessment centers:	.36
•Biodata:	.36
•Job experience (years):	.18
•Training and experience ratings:	.11

— Schmidt and Hunter, Psychological Bulletin, 1998

- ### Some Areas of Investment (administrative)
- Job Announcement
  - Exam scheduling
  - Test scoring and statistics
  - Results notices
  - Referral for vacancies
  - Maintaining eligible lists
  - Communication with clients
  - Appeals, grievances, litigation, and other complaints

- ### But, What's the Trend in Hiring?
- Better
  - Faster
  - Cheaper

- ### Areas of Investment (developmental)
- Job analysis
  - Test development
  - Purchasing tests, working with vendors
  - Test validation research
  - Other research supporting specific tests or testing programs

**But, Good Tests Are Expensive. Where Will We Get The Money?**

**Return Example: Hiring Process**

- Assumes valid replacement
- Savings produced through normal attrition
- Assumes management commitment to cost control

**Cost Containment Example: 7,400 Employees in 92 Job Classes**

Administrative Savings Through Validation and Consolidated Testing

- 92 separate recruitment/basic exams: \$294,000
- 15 job groupings/more thorough exams: \$117,000
- 1 group/sophisticated exam: \$46,000

**Return Example: Employees**

- 100 positions
- 20% turnover
- \$40,000 average salary
- \$6,000 replacement cost

**Employer: “We need to cut costs 20%.”**

**But we can’t cut service levels.**

**Can you help me with that?”**

**Initial Staffing**

Group	Productivity Ratio	Starting Staff	Work Units
A	3.0	10	30
B	2.5	20	50
C	2.0	40	

Year One							
Group	Ratio	Starting			End		Work Units
		Staff	Lose	Hire	Staff	Units	
A	3.0	10	2	10	18	54	
B	2.5	20	4	4	20	50	
C	2.0	40	8	0	32	64	
D	1.5	20	4	0	16	24	
E	1.0	10	2	0	8	8	
		-----	-----	-----	-----	-----	
		100	20	14	94	200	

Savings = \$6,000 x 6 (fewer hires) + \$40,000 x 6 (salaries)

Year Four							
Group	Ratio	Starting			End		Work Units
		Staff	Lose	Hire	Staff	Units	
A	3.0	29	5	10	33	99	
B	2.5	20	4	4	20	50	
C	2.0	21	4	0	17	34	
D	1.5	10	2	0	8	12	
E	1.0	5	1	0	4	4	
		-----	-----	-----	-----	-----	
		85	16	14	82	199	

Savings = \$6,000 x 3 + \$40,000 x 18

Year Two							
Group	Ratio	Starting			End		Work Units
		Staff	Lose	Hire	Staff	Units	
A	3.0	18	4	10	24	72	
B	2.5	20	4	4	20	50	
C	2.0	32	6	0	26	52	
D	1.5	16	3	0	13	19	
E	1.0	8	2	0	6	6	
		-----	-----	-----	-----	-----	
		94	19	14	89	199	

Savings = \$6,000 x 5 + \$40,000 x 11

Year Five							
Group	Ratio	Starting			End		Work Units
		Staff	Lose	Hire	Staff	Units	
A	3.0	33	6	10	37	111	
B	2.5	20	4	4	20	50	
C	2.0	17	3	0	14	28	
D	1.5	8	2	0	6	9	
E	1.0	4	1	0	3	3	
		-----	-----	-----	-----	-----	
		82	16	14	80	201	

Savings = \$6,000 x 2 + \$40,000 x 20

Year Three							
Group	Ratio	Starting			End		Work Units
		Staff	Lose	Hire	Staff	Units	
A	3.0	24	5	10	29	87	
B	2.5	20	4	4	20	50	
C	2.0	26	5	0	21	42	
D	1.5	13	3	0	10	15	
E	1.0	6	1	0	5	5	
		-----	-----	-----	-----	-----	
		89	18	14	85	199	

Savings = \$6,000 x 4 + \$40,000 x 15

- ### Return Example: Five Year Results
- Workforce gradually declines from 100 to 80
  - 
  - Net cost savings of \$2,920,000
  - No reductions in service level



**Recruitment Schedule**

<b>January</b> Police Sergeant Groundskeeper	<b>February</b> Fire Engineer Receptionist	<b>March</b> Summer Workers Dispatcher
<b>April</b> Police Captain Secretary	<b>May</b> Fire Captain Clerical Supervisor	<b>June</b> Police Recruit
<b>July</b> Battalion Chief	<b>August</b> Maintenance Worker Basic Clerical	<b>September</b> Management Analyst Student Intern
<b>October</b> Firefighter	<b>November</b> Administrative Assistant	<b>December</b> Accountant Park Ranger



- Longer Term: Do Assessments Well**
- Communication with everyone
  - Implement really effective examinations
  - Recruitment schedule planning
  - Seize the opportunity to hire the best
  - Proclaim the good (ROI) results! Make presentations, write articles
  - Keep everyone enthused with the great results of using good tests in hiring

**But, How Can You Find The Time?**

**We have the best story around. We need to develop the best ways to tell it.**