EDUCATIONAL ADAPTABILITY

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Educational Preparation of Workforce--2050

- Workplace and Employment are Changing.
- New Educational Needs.
- How Should We Prepare Students and Workers to Meet Economic Changes in Workplace?
- What are Alternative Strategies?
Changing Context of Occupations of Future

- Economic Change (esp. Latin America, Africa and Asia).
- Changing Country Patterns of Growth and Trade. (e.g. Africa, BRIC countries and Mexico)
- Technology.
- New Products and Services.
- Organization of Production.
Failure of Educational Planning

- Even forecasts for a decade of occupational employment are poor.
- Predicting changes in work requirements based upon changing technology and organization over a 50 year period requires knowledge of a future that is entirely unknown.
- Technological change.
- Occupational change
- Workplace organizational change.
Education and Labor Productivity

- **Human Capital.**
  - Education increases skills of numeracy, literacy, and logic.
  - Skills increase productivity.
  - Worker output and quality improve.

- **Workers Benefit from Training.**
  - Educated workers learn faster new responsibilities.
  - Benefit more from learning by doing.
Education and Labor Productivity II

- Educated workers can make better resource allocation decisions.
- Allocation of own time.
- Allocation of other resources of the firm such as avoiding bottlenecks by using skills developed in cross-training.
- Better allocation of scarce inputs.
Achievement Scores and Educational Attainment

- Test scores are one measure of skill.
- Research shows test scores are related to worker productivity and earnings.
- Relationship is surprisingly modest.
- In U.S. number of years of educational attainment explains about four times as much of the variance in earnings as do test scores.
Why is educational attainment so powerful in explaining productivity?

- Students learn many skills not covered by the limited way in which we measure student achievement.
  - Limited test domains.
  - Limited methods of measurement.

- Educational attainment imparts non-cognitive skills important for worker productivity such as conscientiousness, effort, and interpersonal relations.
21st Century Skills and Workplace

- Phelps and Nelson (1966) “Education is especially important to those functions requiring adaptation to change.”
- Change is what we will face continually in 21st Century.
- Rather than educating for narrow occupations and roles, educating for adaptability.
Education Goals for Adaptability

- Initiative.
- Cooperation.
- Group work.
- Peer training.
- Evaluation.
- Reasoning.
- Problem solving.
Worker Goals (cont.)

- Persistence.
- Decision-making.
- Information retrieval and use.
- Planning.
- Managing Time.
- Learning skills.
- Multicultural skills.
Occupational Training

- Even with general occupational qualification, general and specific training will be needed.
- Who will do it?
- Training is becoming more “general” for industry rather than specific for firm.
- Employer reluctance because firm competes for talent and resistance of worker to pay for general training as Becker suggests.
- Seek just-in-time workers. P. Capelli.
Paying for Training

- Modified apprenticeships?
- Incentives to Firms from Governments.
- Industry Associations to Receive Funds and Train and Certify Workers.
- Industry Associations to Retrain and Recertify.
- Underlying Emphasis on Adaptability for both Training and Work.
Conclusion

- Promote continued expansion of education.
- Movement towards worker adaptability.
- Concern with education of immigrants and those from low-income backgrounds.
  - Faster growth of these populations.
  - Need to raise their productive participation.
  - Serious challenge foreseeable future.
Institutional Challenges

- De-emphasize search for new, rigid qualifications and seek more general skills with applications learned on job, training, and apprenticeships.
- Balance between occupational qualifications and adaptability.
- Financing to provide incentives for on-the-job or industry training to use skills productively.