

EDUCATIONAL ADAPTABILITY

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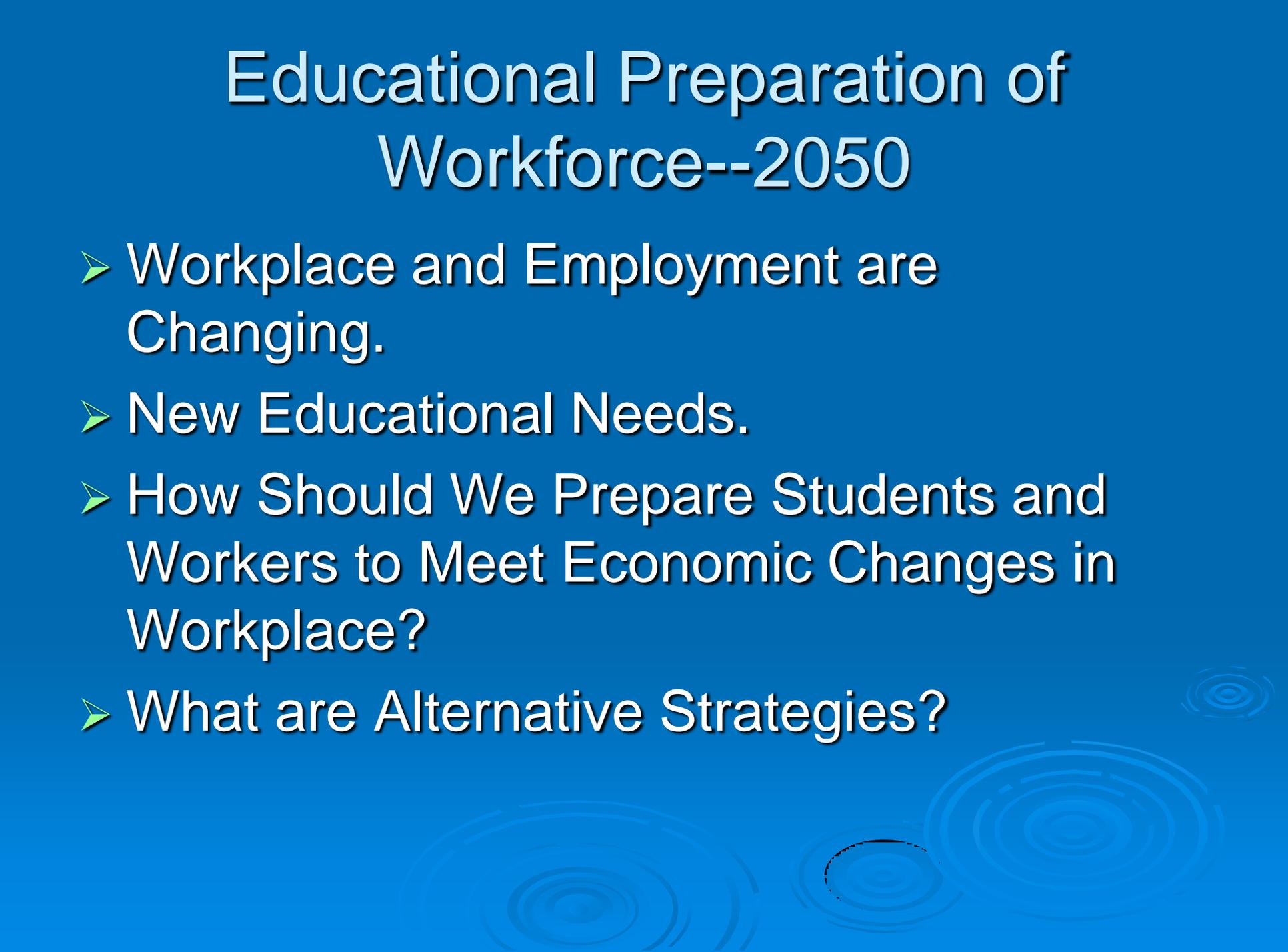
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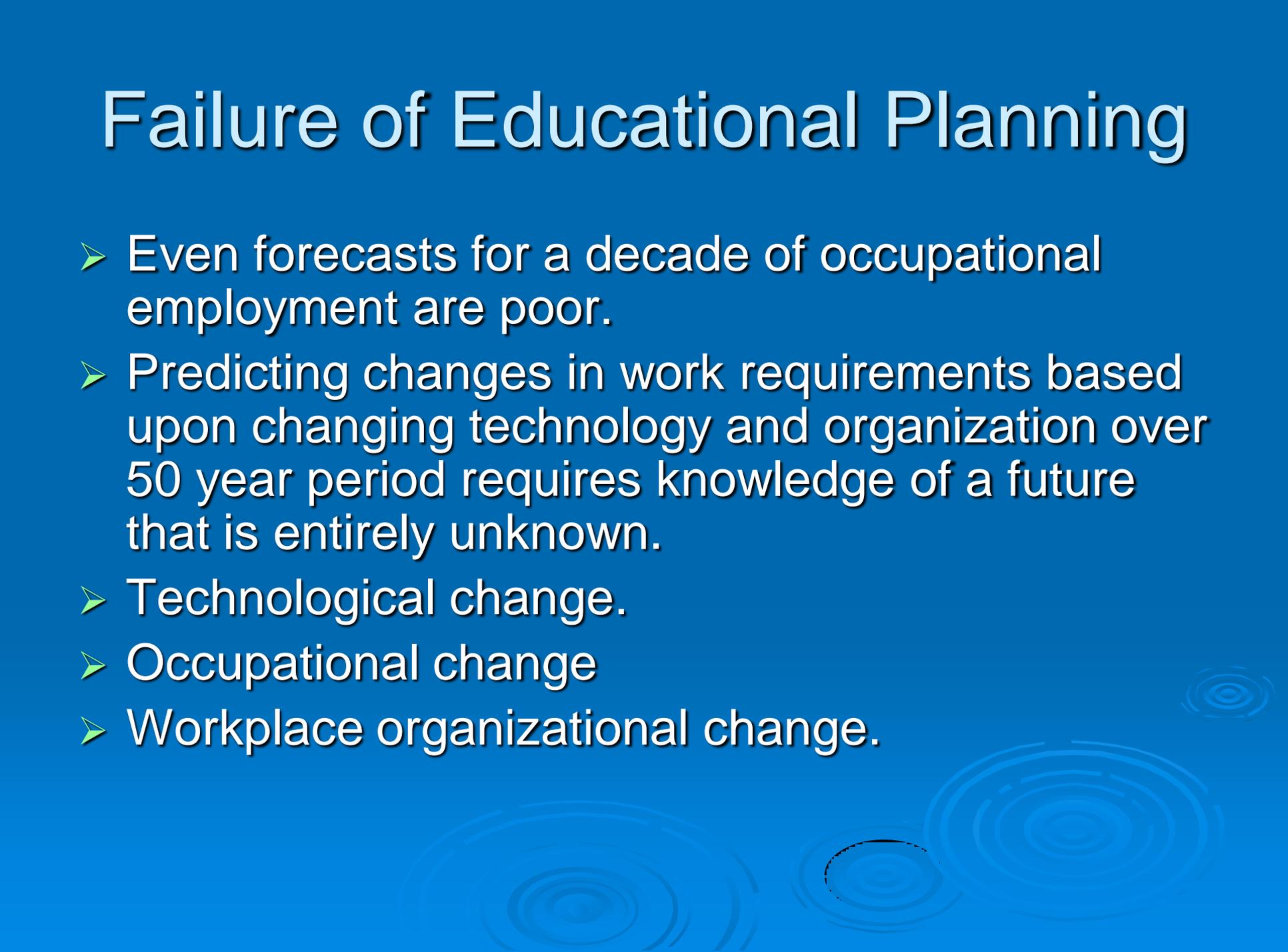
Educational Preparation of Workforce--2050

- 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?
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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.
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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 50 year period requires knowledge of a future that is entirely unknown.
 - Technological change.
 - Occupational change
 - Workplace organizational change.
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Education and Labor Productivity-I

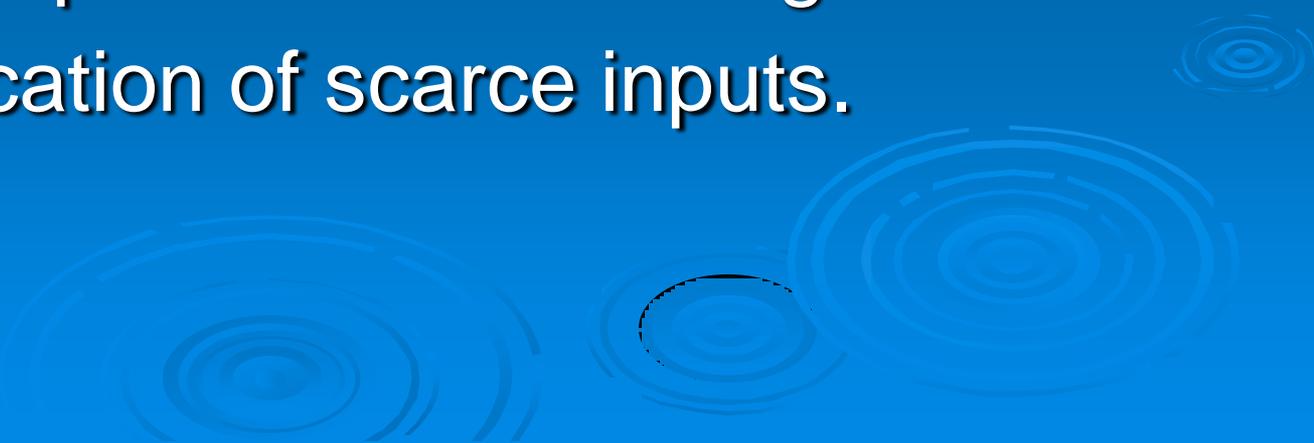
➤ Human Capital.

- 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.
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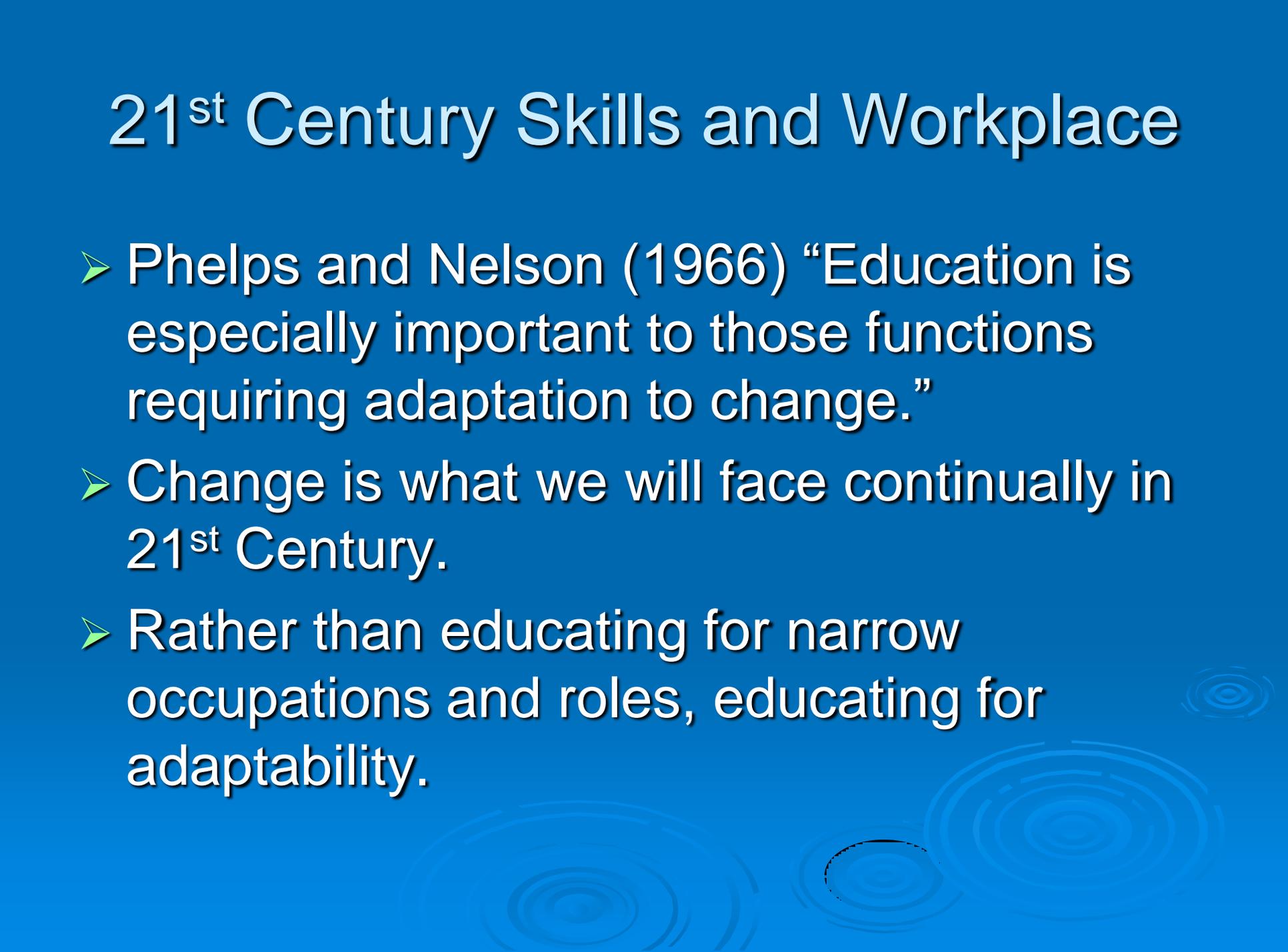
Achievement Scores and Educational Attainment

- 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.
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Education Goals for Adaptability

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

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