The Ongoing Challenge of Identifying Critical Fields

60×30TX
Texas Higher Education Coordinating Board

Major Policy Discussion
July 25, 2019

60×30TX   1

The *60x30TX* plan preamble emphasizes the importance of higher education for society

Higher education improves the lives of Texans.

Our colleges and universities…

- educate our teachers, nurses, and technicians
- find cures for life-threatening diseases and develop technologies that make our lives easier
- inspire, educate, and equip our students to be their best, encouraging them to be more civic-minded, helping them interact in diverse communities, and giving them a passion for lifelong learning
- retrain our adult population, including veterans, helping them find meaningful careers.
- enrich us through the arts and new ideas

The impact of higher education is immeasurable.

60×30TX   2

Higher education adds value to society in many ways; workforce preparation is a critical one

- One important higher education function is to prepare students for the workforce and provide employers and the state with workers who are prepared for the jobs of today and tomorrow

- Identifying critical fields can help ensure higher education efforts are aligned with state and regional needs

- Ensuring that a state and regional workforce needs are met and that higher education supports those efforts is a complex subject

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3

Major Policy Discussion Panelists will present a Regional, State, and National Perspective

Introduction of Panelists:
- Mr. Peter Beard
  Senior Vice President, Regional Workforce Development
  Greater Houston Partnership

- Ms. Mariana Vega,
  Director, Labor Market and Career Information,
  Texas Workforce Commission (TWC)

- Dr. Charles Goldman,
  Senior Economist and Professor of Economics
  Rand Corporation

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4

Question 1

How do we identify what occupational fields, both established and emerging, are critical to the state or regional economy today and what may become a critical field in the future? (What indicators should be considered such as supply, demand, wages, state needs, and linkages to regional planning goals)
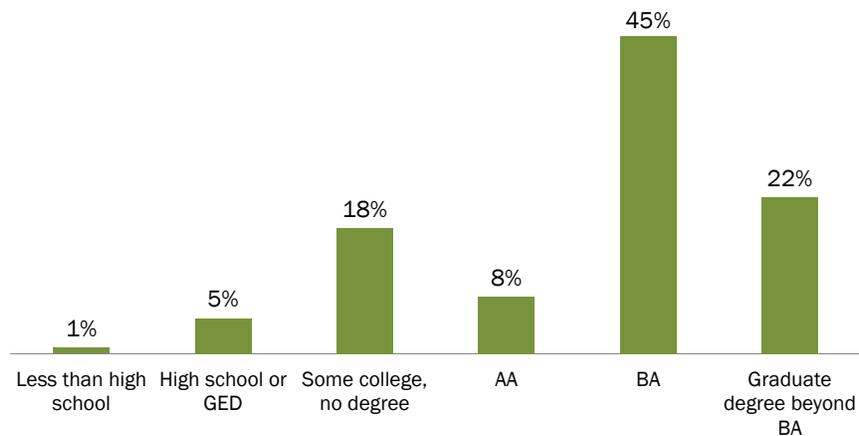
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Question 2

What strategies and policies could support alignment between the programs of higher education institutions and these critical field needs?

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Using Workforce Information for Degree Program Planning in Texas

Charles Goldman

July 2019
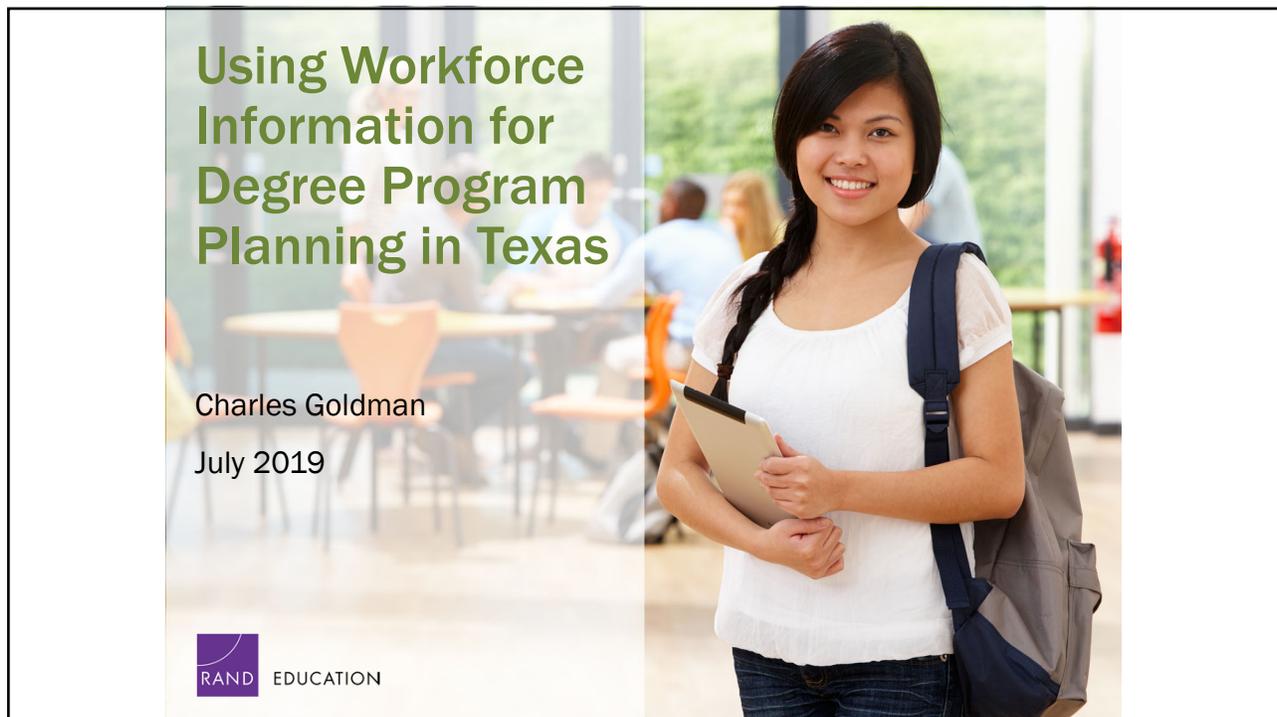
RAND EDUCATION

Most TX computer systems analysts have a BS or higher

Computer systems analysts by education, 2009–2011

- Less than high school: 1%
- High school or GED: 5%
- Some college, no degree: 18%
- AA: 8%
- BA: 45%
- Graduate degree beyond BA: 22%

Source: RAND analysis of American Community Survey

8

But many degree types contribute to this labor force

Computer systems analysts by field of BS, 2009–2011

Field of Degree	Percentage of BS
Computer Science	12.1
Business Management and Administration	7.4
Computer and Information Systems—General	6.3
Finance	5.7
Electrical Engineering	5.5
General Business	5.1
Mathematics	4.4
Computer Engineering	4.0
General Engineering	3.8
Management Information Systems and Statistics	3.7
Accounting	3.2
Biology	2.8
Mechanical Engineering	2.7
Information Sciences	2.7
Economics	2.3
Psychology	2.0
Other	26.6
TOTAL	100.0

Source: RAND analysis of American Community Survey

9

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