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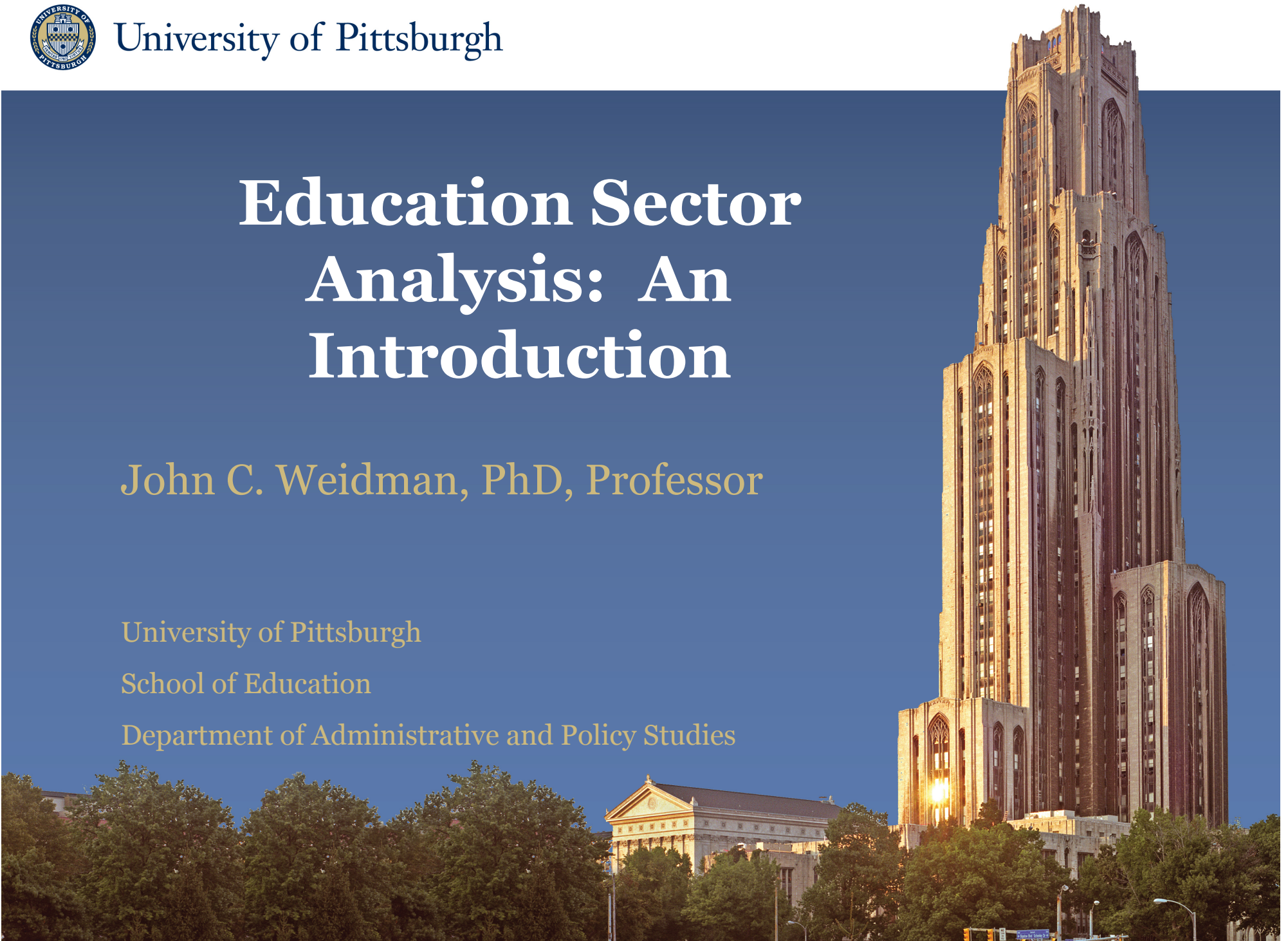
# Education Sector Analysis: An Introduction

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# Contact Information

## *Education Sector Analysis: An Introduction*

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## Objectives (Sack, 2002)

- Promote **DIALOG** on goals, objectives, needs, methods, resources and constraints
- Provide thorough **KNOWLEDGE** of education sector status and impact of government policies
- Identify strengths and weaknesses, resources and constraints, demands and needs (SWOT)
- Establish database and methodology for planning



## Objectives (Sack, 2002)

- Specify (i) areas for investment, and (ii) reallocation of existing resources for improved cost-effectiveness and functioning
- Monitor system performance
- Provide basis for long-term improvements in planning, implementation and monitoring of the system
- Identify methods and means for improved management and policy implementation



# Education Sector Analysis: Process and Product

- Description of status
  - National social and economic conditions
  - Magnitude of education system
  - Legal and policy framework
- Assessment of capacity and functioning
  - Human and physical resources
  - Efficiency and cost-effectiveness



# Sector Strategy and Policy Development

- Stakeholder consultation
  - Government
  - Parents, teachers, students, employers
  - Donors
- Continual dialog among analysts and decision-makers



## Issues (Sack, 2002)

- Are **ASSUMPTIONS** realistic?
- How and by whom is the education sector analysis agenda determined?
  - Stakeholders
  - Donors/funders (EFA; MDG)
- Who benefits?
- How will capacity building for doing education sector analytic work and its application to policy formulation be done?





## Raw Materials: DATA (Sack, 2002)

- **SOURCE**: Where are the education data?
  - EMIS
  - National test system
  - Ministries of Education, Labor, Social Welfare/  
National Census Agency
  - NGOs
- **ACCESSABILITY**: Who **OWNS** the data?
- **QUALITY**: How **RELIABLE** and **VALID** are the data?





## Desired Outcomes (Sack, 2002)

- Analyze and interpret the raw information (**DATA**) on
  - Numbers: students (attendance, gender, ethnicity, age, etc.) by grade; teachers; schools, classrooms, labs
  - Costs: teacher pay scale and career structure; books and teaching materials; buildings; maintenance
  - Financing: who pays what and how much (parents, students, communities, local and national governments)
  - Learning results: achievement scores; transition rates



## Tools for Data Analysis (Sack, 2002)

- Flows and quantities: Depend on assumptions, quality of data (including level of aggregation)
  - Descriptive: Annual information on basic status of education (enrollment; personnel; recurrent expenditures; investment)
  - Trend analysis: student flow; projections; simulation models; learning outcomes; financial patterns and revenue streams
  - Demand for education: students and families; employers (local, national and international labor markets)



# Tools for Data Analysis

- Comparison
  - Geographic: local, regional, national
  - Demographic: gender, socioeconomic status, ethnicity
  - International: learning outcomes (PISA, TIMMS); rankings of universities (Times Higher Education; Shanghai Jiao Tong University)
- Presentation
  - Tables; charts; figures; pictures



## Policy Formulation and Implementation (Sack, 2002)

- Apply data analysis to policy formulation
  - Responsible agencies, legislative bodies
  - Stakeholders
- Policy implementation requires specific sector capacities
  - Relevant institutions
  - Key personnel
  - Clear lines of authority and responsibility



## **Institutional Capacity (European Commission, 2005)**

- Human resources: preparation; experience; level of staffing
- Physical environment: infrastructure; materials
- Enabling environment: financial resources; commitment to high performance/change
- Scope of implementation: local, regional, national



## Skill Requirements (Sack, 2002)

- Capacity to **DO** education sector analysis: the “supply side”
  - Quantitative skills: statistics, data collection and analysis; research design
  - Qualitative skills: functional analysis of institutions; behavioral observation



## Skill Requirements (Sack, 2002)

- Capacity to **USE** education sector analysis in policy formulation: the “demand side”
  - Willingness to base policy on empirical analysis
  - Ability to absorb the logic and rationale of education sector analyses
  - Ability to reconcile technical analyses with political imperatives and pressures; negotiate; compromise





## Skill Requirements (Sack, 2002)

- Communication capabilities (intersection of “supply” and “demand” sides)
  - Presentation skills: speaking; writing; graphics; PowerPoint; multi-media
  - Willingness and ability to communicate analytical results in ways that can be understood by all stakeholders



## Strategic Options for Capacity Building (Sack, 2002)

- Education sector analysis should be conceived as a capacity building exercise
- External experts should focus on capacity building and skills development
- Extensive use should be made of local expertise linked to the education sector
- Use tools and methods appropriate for local expertise
- Learning-by-doing, on-the-job training



## Resources

- Asian Development Bank. 2010. *Viet Nam: Preparing the Higher Education Sector Development Project (HESDP)*. Technical Assistance Consultant's Report. Project Number: 4207901.  
<http://www.adb.org/Documents/Reports/Consultant/VIE/42079/42079-01-vie-tacr-03.pdf>
- Asian Development Bank. 2004. *Education Reforms in Countries in Transition: Policies and Processes*. Six Country Case Studies Commissioned by the Asian Development Bank in Azerbaijan, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, and Uzbekistan. Manila, Philippines.  
<http://www.adb.org/Education/educ-reforms-countries.pdf>
- European Commission. 2005. *Institutional Assessment and Capacity Development: Why, What and How?* Tools and Methods Series. Reference Document No. 1. Luxembourg: Office for Official Publications of the European Communities.  
[http://ec.europa.eu/europeaid/multimedia/publications/publications/manuals-tools/t106\\_en.htm](http://ec.europa.eu/europeaid/multimedia/publications/publications/manuals-tools/t106_en.htm)



## Resources

- Government of Mongolia. 2006. *Master Plan to Develop Education of Mongolia in 2006-2015*. Ulaanbaatar.  
<http://planipolis.iiep.unesco.org/upload/Mongolia/Mongolia%20Education%20Master%20Plan%202006-2015.pdf>
- Ministry of Foreign Affairs of Denmark, Danida. 2008. *Sector Gender Analysis*. Copenhagen.  
[www.danidadevforum.um.dk/NR/rdonlyres/05271F2E-C4DF-47FC-B5AD-CDCoBA6F6A76/0/05\\_SectorGenderanalysis.pdf](http://www.danidadevforum.um.dk/NR/rdonlyres/05271F2E-C4DF-47FC-B5AD-CDCoBA6F6A76/0/05_SectorGenderanalysis.pdf)
- Ministry of Foreign Affairs of Denmark, Danida. 2006. *Gender-Sensitive Monitoring and Indicators*. Technical Note. Copenhagen.  
<http://www.danidadevforum.um.dk/en/menu/MonitoringAndIndicators/IndicatorsInSectors/>
- Ministry of Foreign Affairs of Denmark, Danida. 2006. *Monitoring and Indicators in the Education Sector*. Technical Note. Copenhagen.  
<http://www.danidadevforum.um.dk/en/menu/MonitoringAndIndicators/IndicatorsInSectors/>



## Resources

- Sack, Richard. 2002. *Sector Analysis*. PowerPoint Presentation. Windhoek, Zambia: ADEA Working Group on Education Sector Analysis (ESA), 21 November.  
<http://www.adeanet.org/adeaPortal/adea/publications/docs/R.%20Sack.ppt>
- Saldanha, Cedric and Whittle, John. 1998. *Using the Logical Framework for Sector Analysis and Project Design: A User's Guide*. Manila: Asian Development Bank.  
[http://www.adb.org/Documents/Guidelines/Logical\\_Framework/default.asp](http://www.adb.org/Documents/Guidelines/Logical_Framework/default.asp)
- Weidman, John C. "Developing the Mongolian Education Sector Strategy 2000-2005: Reflections of a Consultant for the Asian Development Bank." *Current Issues in Comparative Education* [Online], 3 (No. 2, May 1, 2001). <http://www.tc.edu/cice/Issues/03.02/32weidman.pdf>
- World Bank. 2011. *Learning for All: Investing in People's Knowledge and skills to Promote Development*. World Bank Group Education Strategy 2020. Washington, DC. <http://www.worldbank.org/education>