The Handbook of Global Education Policy

Edited by Karen Mundy, Andy Green, Bob Lingard, and Antoni Verger



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Contents

Notes	on (Contributors	ix
Ackno	wle	dgements	xix
List of	Acı	ronyms	XX
and De	ebat	on: The Globalization of Education Policy – Key Approaches es andy, Andy Green, Bob Lingard, and Antoni Verger	1
Part I	Ed	ucation and a Global Polity	21
		Introduction Andy Green	22
	1	Educational Policies in the Face of Globalization: Whither the Nation State? Martin Carnoy	27
	2	World Society and the Globalization of Educational Policy Francisco O. Ramirez, John W. Meyer, and Julia Lerch	43
	3	The Global Diffusion of Education Privatization: Unpacking and Theorizing Policy Adoption Antoni Verger	64
	4	Economic Growth in Developing Countries: The Role of Human Capital <i>Eric A. Hanushek</i>	81
	5	Education, Poverty, and the "Missing Link": The Limits of Human Capital Theory as a Paradigm for Poverty Reduction <i>Xavier Bonal</i>	97

vi CONTENTS

	6	Gender and Education in the Global Polity Elaine Unterhalter	111
	7	The Global Educational Reform Movement and Its Impact on Schooling Pasi Sahlberg	128
	8	Global Convergence or Path Dependency? Skill Formation Regimes in the Globalized Economy Marius R. Busemeyer and Janis Vossiek	145
Part II	Edu	ucational Issues and Challenges	163
		Introduction Bob Lingard	164
	9	Education and Social Cohesion: A Panglossian Global Discourse Andy Green and Jan Germen Janmaat	169
	10	Policies for Education in Conflict and Post-Conflict Reconstruction Sarah Dryden-Peterson	189
	11	Human Rights and Education Policy in South Asia Monisha Bajaj and Huma Kidwai	206
	12	Early Childhood Education and Care in Global Discourses <i>Rianne Mahon</i>	224
	13	Education for All 2000–2015: The Influence of Global Interventions and Aid on EFA Achievements Aaron Benavot, Manos Antoninis, Nicole Bella, Marcos Delprato, Joanna Härmä, Catherine Jere, Priyadarshani Joshi, Nihan Koseleci Blanchy, Helen Longlands, Alasdair McWilliam, and Asma Zubairi	241
	14	The Politics of Language in Education in a Global Polity <i>M. Obaidul Hamid</i>	259
	15	The Global Governance of Teachers' Work Susan L. Robertson	275
	16	The Global Construction of Higher Education Reform Simon Marginson	291
Part III	Glo	obal Policy Actors in Education	313
		Introduction Antoni Verger	314
	17	The Historical Evolution and Current Challenges of the United Nations and Global Education Policy-Making	319

CONTENTS vii

	18	The World Bank and the Global Governance of Education in a Changing World Order Karen Mundy and Antoni Verger	335
	19	The Changing Organizational and Global Significance of the OECD's Education Work Bob Lingard and Sam Sellar	357
	20	The Policies that Shaped PISA, and the Policies that PISA Shaped Andreas Schleicher and Pablo Zoido	374
	21	Dragon and the Tiger Cubs: China–ASEAN Relations in Higher Education Rui Yang and Jingyun Yao	385
	22	An Analysis of Power in Transnational Advocacy Networks in Education Ian Macpherson	401
	23	The Business Case for Transnational Corporate Participation, Profits, and Policy-Making in Education Zahra Bhanji	419
	24	New Global Philanthropy and Philanthropic Governance in Education in a Post-2015 World Prachi Srivastava and Lianna Baur	433
Part IV		ical Directions in the Study of Global cation Policy	449
		Introduction	450
		Karen Mundy	
	25	Rational Intentions and Unintended Consequences: On the Interplay between International and National Actors in Education Policy Timm Fulge, Tonia Bieber, and Kerstin Martens	453
	2526	Rational Intentions and Unintended Consequences: On the Interplay between International and National Actors in Education Policy Timm Fulge, Tonia Bieber, and Kerstin Martens	453 470
		Rational Intentions and Unintended Consequences: On the Interplay between International and National Actors in Education Policy Timm Fulge, Tonia Bieber, and Kerstin Martens Policy and Administration as Culture: Organizational Sociology and Cross-National Education Trends	
	26	Rational Intentions and Unintended Consequences: On the Interplay between International and National Actors in Education Policy Timm Fulge, Tonia Bieber, and Kerstin Martens Policy and Administration as Culture: Organizational Sociology and Cross-National Education Trends Patricia Bromley Ethnography and the Localization of Global Education Policy	470

viii CONTENTS

30	Joined-up Policy: Network Connectivity and Global Education Governance Carolina Junemann, Stephen J. Ball, and Diego Santori	535
31	A Vertical Case Study of Global Policy-Making: Early Grade Literacy in Zambia Lesley Bartlett and Frances Vavrus	554
32	Global Indicators and Local Problem Recognition: An Exploration into the Statistical Eradication of Teacher Shortage in the Post-Socialist Region Gita Steiner-Khamsi	573
Name Index		590
Place Index		592
Subject Inde	x	595

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List of Acronyms

5DE five dimensions of exclusion ADB Asian Development Bank AFDB African Development Bank

ANCEFA African Network Campaign on Education for All

APEC Asia-Pacific Economic Cooperation
ASEAN Association of Southeast Asian Nations
ASER Annual Status of Education Research

ASPBAE Asia South Pacific Association for Basic and Adult Education

AUT Austria

BIBB Bundesinstitut für Berufsbildung BIA Bridge International Academies

BOG Board of Governors

BRAC Bangladesh Rural Advancement Committee
BRICS Brazil, Russia, India, China, and South Africa

BtL Breakthrough to Literacy

CAN Canada

CAP consolidated appeal process CDA Critical Discourse Analysis

CDC CDC Group plc., formerly Commonwealth Development Corporation CEDAW Convention on the Elimination of All Forms of Discrimination against

Womer

CEECIS Central and Eastern Europe and the Commonwealth of Independent

States

CEF Commonwealth Education Fund
CEI Center for Education Innovations
CERF Central Emergency Response Fund

CERI Centre for Educational Research and Innovation

CH Switzerland

CIDA Canadian International Development Agency

CHF Common Humanitarian Fund

CLADE Coalition for the Right to Education in Latin America

CME coordinated market economy

CNN Cable News Network

COPOME Cordinatoria Popular de Madres Educadoras

CPE Cultural Political Economy

CRC Convention on the Rights of Children

CREATE Campus for Research Excellence and Technological Enterprise

CSEF Civil Society Education Fund

DEELSA Directorate for Education, Employment, Labour and Social Affairs DFATD Department of Foreign Affairs, Trade and Development (Canada)

DFID Department for International Development (UK)
DIBELS Dynamic Indicators of Basic Early Literacy Skills

EAHEP EU-Asia Higher Education Platform

ECD Early Child Development

ECEC Early Childhood Education and Care

ECTS European Transfer and Accumulation System

EEPCT Education and Emergencies and Post-Crisis Transition

EFA Education for All

EFA-FTI Education for All Fast Track Initiative

EFTS Equivalent full-time study

EGRA Early Grade Reading Assessment
EMI English as a Medium of Instruction
EPDC Education Policy and Data Center
EQUIP Education Quality Improvement Program

ERA Education Reform Act
ERF Emergency Response Fund
ESSU Education Sector Strategy Update

EU European Union

FAWE Forum of African Women Educationists

FIFA Fédération Internationale de Football Association

FIMS First International Math Study

FR France

G8 Group of Eight G20 Group of Twenty

GATS General Agreement on Trade in Services

GAW Global Action Week

GBCE Global Business Coalition for Education

GCE Global Campaign for Education GEC Girls' Education Challenge GEFI Global Education First Initiative

GER Germany

GERM Global Educational Reform Movement
GIIN Global Impact Investing Network
GNH Gross National Happiness Index, Bhutan

GPE Global Partnership for Education
GPS Global Positioning System

GTER Gross Tertiary Enrolment Ratio
HCT Human Capital Theory

HEI Higher Education Institution
HPS High Participation System
IAD Indicators and Analysis Division

IBRD International Bank for Reconstruction and Development

ICT information and communications technology

IDA International Development Agency
IDP Internally Displaced Person

IEA International Association for the Evaluation of Educational Achievement

IEG Independent Evaluation Group (World Bank)
IELTS International English Language Testing System

IFC International Finance Corporation IGO Intergovernmental Organization IMF International Monetary Fund

INEE Inter-Agency Network for Education in Emergencies

INES Indicators of Education Systems

INGO international non-governmental organization

IT Information Technology
ITA Idara-e-Taaleem-o-Aagahi
ITB Industrial Training Board

JAP Japan

KIPP Knowledge is Power Program
LCPS Low Cost Private School
LEG Local Education Group
LME liberal market economy

LPIP Learner Performance Improvement Plans

LPP Language Policy and Planning MA Modern Apprenticeship

MAI Multilateral Agreement on Investment
MDG Millennium Development Goal
MERCOSUR Southern Common Market
MET Measures of Effective Teaching
MOOC Massive Open Online Course
MPF Manpower Planning Forecast
MSC Manpower Services Commission

NAFTA North-American Free Trade Agreement

NAPLaN National Assessment Program Literacy and Numeracy

NBTL New Breakthrough to Literacy NCF National Curriculum Framework

NCFTE National Curriculum Framework for Teacher Education

NCLB No Child Left Behind NCP New Colombo Plan

NGO non-governmental organization NPM New Public Management NRP National Reading Panel

NUEPA National University of Education Planning and Administration, New

Delhi

OECD Organisation for Economic Co-operation and Development

OECD-DAC Organisation for Economic Co-operation and Development-Development

Assistance Committee

OOSC Out of School Children

PALF Pearson Affordable Learning Fund
PEAS Promoting Equality in African Schools

PIAAC Programme for International Assessment of Adult Competencies

PIRLS Progress in International Reading Literacy Study

PISA Programme for International Student Assessment

PPP public-private partnership

PRES Pôles de recherche et d'enseignement supérieur

PRSP Poverty Reduction Strategy Paper
PTA Parent Teacher Association

PTA Parent Teacher Associa RoR rate of return analysis

ROWITE OECD working party on the role of women in the economy

RTE Right to Education Act, India

RTI Research Triangle Institute International

RTS Read to Succeed RWS Real World Strategies R&D Research and Development

SABER Systems Approach for Better Educational Results

SAGE Strategies for Advancing Girls' Education

SAP Structural Adjustment Policy
SAS Survey of Adult Skills (OECD)
SITAN UNICEF Situational Analysis
SOCAP Social Capital Markets

SRGBV School Related Gender Based Violence

SSA Sarva Shiksha Abhiyan

STEM science, technology, engineering, and mathematics

SUK Schweizerische Universitätskonferenz

SVP Swiss People's Party SWAp sector-wide approaches

SWE Sweden

TALIS Teaching and Learning International Survey

TAN(s) Transnational Advocacy Network(s)
TEC Training and Enterprise Council

TFA Teach for America

TIMSS Trends in International Mathematics and Science Survey

TNC transnational corporation

TOEFL Test of English as a Foreign Language UCDP Uppsala Conflict Data Program

UDHR Universal Declaration of Human Rights

UIS UNESCO Institute for Statistics

UK United Kingdom
UN United Nations

UNDP United Nations Development Programme

UNESCO United Nations Educational, Scientific and Cultural Organization

UNFPA United Nations Population Fund

UNHCR United Nations High Commissioner for Refugees

UNICEF United Nations Children's Fund

UNCRC United Nations Convention on the Rights of Children

UPE universal primary education
USA United States of America

USAID United States Agency for International Development

VAT value-added tax

VET vocational education and training

VoC varieties of capitalism

WCCES World Council of Comparative Education Societies

WCT	World Culture Theory
WCU	World Class University

WISE World Innovation Summit for Education

WTO World Trade Organization YTS Youth Training Scheme

Introduction: The Globalization of Education Policy – Key Approaches and Debates

Karen Mundy, Andy Green, Bob Lingard, and Antoni Verger

Education and schooling have long been deeply implicated in processes of internationalization and global economic integration. Throughout the course of modern history, conquering powers, religious movements, and traders each carried with them new approaches to acculturation and learning – perhaps never more prominently than in the 19th and early 20th centuries, when the newly minted educational systems of Western states were carried around the world by colonial powers. Yet it was not until the mid-20th century that education itself became a formal issue arena for international policy-makers and international organizations. The formation of the United Nations Education and Cultural Organization (UNESCO) and the establishment of the Universal Declaration of Human Rights each signaled a new era for global policy-making in education, opening the way to a proliferation of bilateral, multilateral, and non-governmental efforts to influence and transform educational systems and set global educational standards.

Today, governments are increasingly engaged in forms of global educational exchange and policy-making, through membership in such diverse institutions as the Organisation for Economic Cooperation and Development (OECD), the Group of 8 (G8), the World Bank, the European Union (EU), the World Trade Organization (WTO), and the Association of Southeast Asian Nations (ASEAN). International comparison of the performance of education systems is a matter for media headlines, building on the widely accepted view that educational success is a proxy for economic competitiveness. Emerging powers in Asia, the Middle East, and Latin America have created new regional educational organizations and development agencies with keen interest in education policy. Non-state actors and institutions are also increasingly influential – with powerful transnational educational business, professional associations, technology companies, new philanthropies, transnational civil society advocacy

networks, and the global business community (e.g. World Economic Forum) each actively participating in the construction of new global "policy spaces" for education.

To understand the increasingly complex and pluri-lateral field of global educational policy, we begin the *Handbook of Global Education Policy* by providing an overview of the actors, policies, and contexts – including processes of globalization – which have spurred the expansion of global policy-making in education. In what follows we first look at historical antecedents to global policy-making in education, before exploring globalization and its impacts on educational systems. We then turn to debates about how best to conceptualize and study the mechanisms and processes that drive education policy in this new global era – reviewing theories of convergence, divergence, coercion, and policy borrowing as frames for understanding global education policy. This chapter concludes with a brief section on key issues and policy actors in global education, and a short overview of the organization of this volume.

Antecedents to Today's Global Education Policy

Education policy has long been understood as the putative domain of the nation state. Sociologists and political scientists, beginning with Max Weber, Emile Durkheim, and John Stuart Mill, recognized that national educational systems arose as part of the apparatus of modern government in the Western world. Education systems complemented the state's legitimate right to exercise power within national territory, providing a mechanism for socializing citizens and allowing for the authoritative allocation of values. Schooling spread rapidly because of popular demand from citizens and communities - who saw education as an opportunity for personal and group progress. Thus, from the 19th and into the 20th centuries, governments in many parts of the world expanded access to schooling: they achieved near universal enrolment at elementary and later secondary levels, and established publicly funded systems for higher education. Early educational systems, which had often been funded and controlled by religious organizations or communities, were gradually absorbed into nationally funded and controlled public systems; leaving governments to play an increasingly authoritative role in childhood socialization. By controlling the allocation of public resources for education; setting national (and sub-national) curricula and standards; hiring and paying teachers and structuring their work; and owning the schools themselves, schooling and school systems played a central role in constructing what Anderson (1991) describes as the "imagined community" of the modern nation state.

In this context, it is perhaps unsurprising that cross-national education policy borrowing emerged as a persistent feature of national educational policy setting. From early in the 19th century, when national or "public" educational systems were first consolidated in Western Europe and North America, education policy makers and reform advocates were active in analyzing developments in other countries, both to provide evidence on what policies to avoid and on what policies might be usefully adopted at home. State-provided elementary education in Prussia in the 1830s, for instance, offered an influential model that was widely studied by reformers in other countries. The Prussian system of free and compulsory state elementary schooling, with professional training for teachers in state Normal schools, and centrally

controlled curricula, was used as a basis in the 1830s for the Guizot reforms in France and, in part, for Horace Mann's reforms to the education system in Massachusetts in the USA (Green 2013). Reforms to technical and secondary schooling in England in the late 19th century owed much to the advocacy of continental European policies by leading reformers such as the scientist, Lyon Playfair, and the Schools Inspector, Matthew Arnold, both of whom had conducted extensive research on foreign education policies. When the government in Meiji Japan first developed its national education system in the 1870s, emissaries were dispatched to study the education systems in Germany and the USA, and many of the policies in those countries were subsequently adopted or adapted in the development of the Japanese education system.

Yet while examples from the 19th century, and indeed before, of educational policy borrowing are legion, prior to the mid-20th century there are few examples of organized and sustained international policy setting in education. Apart from modest experiments – such as the creation of the International Bureau of Education at the time of the League of Nations, education remained pre-eminently a national concern. Policy borrowing between states occurred primarily through individual reformers' initiatives, without support from transnational organizations.

The end of World War II marked an important departure from this trajectory. The creation of the United Nations and the first international intergovernmental organization with an educational mandate, UNESCO, as well as the establishment of the Universal Declaration of Human Rights (UDHR), placed education on the agenda of a new kind of multilateralism among post-war governments. Focused on building shared principles and values across nations through stronger economic and political interdependence, the new multilateral architecture helped to construct a form of "embedded liberalism" that married together the objectives of building more inclusive economies (primarily through the recognition of the need for social safety nets and greater access to jobs), with greater civil and political freedoms and a more integrated, and a better managed, world economy (through the creation of the Bretton Woods institutions) (Ruggie 1982; Mundy 1998). It is in the context of "embedded liberalism" that education became recognized as a powerful tool not only for constructing more inclusive national economies, but for ensuring a lasting peace based on common values of individual freedoms and shared prosperity. While education would remain predominantly the preserve of national sovereignty in this new global order, for the first time, the need for global standards and cross-national problem solving in education was recognized as an appropriate and important domain for multilateralism.

The breakdown of colonialism and the emergence of a whole new group of independent states after World War II further spurred the growth of international educational policy-making. By the 1960s, newly formed national programs and agencies for delivering foreign aid, as well as international organizations, such as the United Nations Children's Fund (UNICEF) and the World Bank, had begun to join UNESCO in supporting national educational development in newly independent states. The enormous expansion of international flows of policy-making and exchange in education that followed was marked by the uneven and increasingly polarized power relationships across nation states. Education policies became, especially during the Cold War, a prime arena for competition and influence among the Western and Eastern bloc countries. Thus a fragmented and diverse architecture for

international educational policy exchange and influence developed. It included the joint problem solving approach embodied in the educational work of the OECD and other regional organizations; the multilateral (and officially neutral and scientifically driven) activities of such international organizations as UNESCO, UNICEF and the World Bank; and the more self-seeking bilateral flows of aid and advice from richer to newly independent developing countries.

Globalization and the Take-Off of Global Education Policy After 1975

Globalization can be defined as the de-territorialization of social, political, and economic relationships, and the rapid integration of societies across the previously territorially bound units we call "nation states" (Harvey 1989; Ruggie 1993). As noted by Held and colleagues:

Globalization can be thought of as a process (or set of processes) which embodies a transformation in the spatial organization of social relations and transactions – assessed in terms of their extensity, intensity, velocity and impact – generating transcontinental or interregional flows and networks of activity, interaction, and the exercise of power. (Held *et al.* 1999, 16)

While globalization processes have been ongoing since at least the 16th century, scholars of global education policy argue that globalization processes over the past 35 years have set the stage for new types of power and complex pluri-lateral forms of influence on domestic educational systems, creating new and more globalized education policy discourses and a more formalized global policy architecture (Rizvi and Lingard 2010). Heightened integration of economies and markets (though profoundly uneven), accelerated mobility and communication across borders, fueled by new technologies, and the end of the Cold War, have each changed the nature of governments' strategic interests and their ability to control and contain domestic social and economic trajectories, allowing for emergence of new global policy spaces for education.

For educational systems, and for other putatively national public policy domains, perhaps the first point of impact from globalization has come from the acceleration of economic integration that has occurred since the 1970s, following the ending of the Bretton Woods system of fixed exchange rates in 1971 and the subsequent movement toward financial de-regulation. The rise of transnational corporations, globally integrated production chains, and markets, and increasingly mobile flows of capital, each contributed to the deepening globalization of national economies and the creation of a global economy (Castells 1996; Green 1997; Harvey 1989; Bourdieu 2003). Although each nation state has followed its own unique trajectory in responding to these changes, it is clear that economic globalization had some common effects on education policy. Globalization shifted post-World War II sources of state power by limiting the historical ability of states to tax capital, and redefining trajectories for national economic development and thereby requirements for skills and human capital.

Economic globalization elicited two key types of educational policy responses from nation states. Beginning in the 1980s, *finance driven reforms* – the search for cost efficiencies, the introduction of new forms of user payments, and other sources

of private finance – came to characterize both Western countries and those in the developing world (Carnoy 1999). Alongside these reforms, *competitiveness driven* changes to education systems, including the introduction of new outcomes based performance standards, national and international assessments, new modes of accountability, decentralization of services, and the diversification of service providers, came to characterize a new drive for educational improvement around the world (Carnoy 1999). As Verger (Chapter 3, this volume), Ball (2012), and others have suggested, the introduction of private sector management approaches into the public sector, including through the involvement of private sector organizations, both philanthropic agencies and edu-businesses, became increasingly central to competitiveness driven educational reform.

Perhaps the earliest impact of economic globalization can be found in more limited state capacity to fund the comprehensive and redistributive educational opportunities that had characterized Western welfare states after World War II. Economic globalization also contributed to increasing income inequality within states, in ways that have affected the families and students that education systems serve (Piketty 2014). Yet increasing economic competition between states also put pressure on countries to maintain or improve living standards by raising productivity through ever-greater investments in research, innovation, and skills, as part of the growth of the global knowledge economy (Brown et al. 2001). Profits in many economic sectors increasingly depended on the development of high value-added goods and services, leading to increased demand from enterprises for highly skilled labor, as well as from individuals for higher-level education and more qualifications. Ever greater investments were required from governments, not least in some of the most highly developed countries where doubts about the competitiveness of their labor forces were emerging as well as doubts about whether the skills produced by their school and universities systems were sufficient to compete with rapidly developing countries, not least in Asia. This placed increasing strains on public budgets. The major common problem for governments, then, was how to finance the rising costs of meeting the ever growing demand for education and skills, while maintaining globally competitive tax regimes (Carnoy 1999).

Providing higher quality education and training was a major preoccupation of many governments from the 1980s onwards, and particularly after 2000 when the onset of the Programme for International Student Assessment (PISA) surveys appeared to offer a way of comparing the quality of education across countries (Hanushek and Woessmann 2010; Sahlberg 2011). Governments wanted more effective education, but not at greater expense, so measures were sought to improve the efficiency of school systems. From the late 1980s onwards, the USA and the UK strongly promoted the cause of educational marketization. The market logic was simple: schools would be more efficient if they were subject to greater competition. To ensure that market forces had their desired effects, there had to be greater school choice and diversity, more information for consumers, and greater managerial autonomy for schools so that they could respond in innovative ways to competitive pressures. As Salhberg details in Chapter 7 of this Handbook, the 1988 Education Act, brought in by the Thatcher government in the UK, provided the model that many other countries were to follow. Policies on school choice and diversity and on devolution of control to schools followed in many countries, and these in turn led to

further requirements for new policies for measuring the outputs and performance of decentralized systems.

Alongside economic globalization, the past 30 years have also seen the acceleration of political globalization – the re-territorialization of the political power of the nation state. Political globalization can be traced both to the rise of joint problem solving across countries facing similar demands from economic globalization, and to the rise and influence of international organizations and other global policy actors. As discussed in several chapters of this volume, international organizations such as the OECD and the World Bank have played a rising role during the past half century as purveyors of policy solutions to national educational (as well as economic) problems, and in so doing have created a common framework for global educational policy discourse or what Novoa (2002) calls "global policyspeak."

International agencies rose to prominence in the context of rapid globalization by offering some novel solutions to dilemmas of globalization. The concept of lifelong learning, sponsored by the OECD, emerged as one of the first over-arching global policy discourses in the realm of education, and was rapidly adopted, at least rhetorically, in both developed and developing countries, to meet two pressing needs (European Commission 1995; 2001; OECD 1996; Green 2003; Jakobi 2009). On the one hand, learning throughout the life course - from cradle to grave - offered a way to meet the challenge arising from the rapid development of new technologies for constant skills upgrading within the work force (Brown et al. 2001; OECD 1996). People would continue to learn new skills throughout their working lives and even beyond, so that they would be able to cope with ever longer periods of retirement resulting from the increasing longevity experienced in most countries. At the same time, lifelong learning provided a way around the problem of the escalating costs for education. Under the new paradigm, learning was to become "life-wide" as well as "life-long," occurring not only in the school and college, but also in the workplace, the family, and the local community (European Commission 2001). This meant that the costs could be spread between the state, which would remain largely responsible for schooling, the employer, and also the individual and his or her family. The concept had immediate appeal to governments, which found themselves unable to resist the political pressure of their electorates for expanded educational provision, but found themselves unable to pay for it, except in the diminishing number of social democratic North West European states that could persuade their electors to pay higher income taxes.

"Neo-liberalism" – the predisposition of governments to increasingly favor free market solutions over governmental intervention, and individual effort over the provision of collective safety nets – has arguably become the vernacular for the global policyscapes elicited by globalization and spread by international organizations (Ball 2013). Arising in the first instance from policy shifts in Anglo-American states (a move that Verger *et al.* (2012), adopting Boaventura de Sousa Santos terminology, describe as "globalized localisms"), neo-liberal approaches that emerged in Anglo-American states were rapidly picked up in the developing world, and even in putatively socialist societies like China and Vietnam with talk of "market socialism." In education the spread of market choice policies, privatizations of various kinds, new standardized testing regimes (often complementing international testing such as PISA), new test based modes of educational accountability, and an emphasis upon

educational standards led to a profound change in the way education systems would be managed – and to policy discourses sharply different from the embedded liberalism and social welfare state norms of the immediate post-World War II era. Technological development reinforced such changes, contributing to the development of globalized technologies of administration – including the technical infrastructure for the globalization of educational data, most notably through the massive increase in cross-national learning assessments, firstly issuing from the surveys conducted by the International Association for the Evaluation of Educational Achievement (IEA) (Trends in International Mathematics and Science Survey (TIMSS) and Progress in International Reading Literacy Study (PIRLS) etc.) and subsequently from the OECD (including main PISA, PISA for Schools, PISA for Development, Teaching and Learning International Survey (TALIS), and the Programme for International Assessment of Adult Competencies (PIAAC)).

Yet it is important to note that the homogenizing influence of new global-level political processes and policy discourses has not circulated in an even or predictable fashion. In part, this is a reflection of the strong role that local context - and in particular local institutions - play in shaping national responses to, and engagement with, global policy processes. It also reflects the profound shifts of power within domestic education systems, where the rise of more complex forms of "networked governance" means that "government is understood to be located alongside business and civil society actors in a complex game of public policy formation, decisionmaking and implementation" (Koppenjan and Klijn 2004, 25; Ball and Junemann 2012), as modeled in Anglo-American contexts. Cultural and technological globalization has tended to reinforce subnational policy voices, by heightening opportunities for exchange and movement of people and ideas. New opportunities for cross-national policy exchange and contestation among these new non-state actors have emerged. At the same time, new regionalisms have arisen in education - with organizations such as ASEAN, the North-American Free Trade Agreement (NAFTA), the Southern Common Market (MERCOSUR) in Latin America, and the EU each spawning their process and approaches to educational problem solving (Lawn and Grek 2012).

New Approaches to the Study of Education Policy

In order to study the increasingly complex, pluri-lateral, and cross-scalar flow of ideas and power in education policy that have emanated from globalization processes, education policy scholars have coined new terms, employed new theoretical frames, and developed new methodological approaches. As will be seen throughout this volume, vibrant theoretical and methodological debates have accompanied these new efforts to conceptualize research on global education policy.

We have spoken to this point of global education policy, but in fact what has been globalized are mainly policy discourses, whose take-up in nations remains heavily mediated. One of the central concerns in the study of global education policy is the uneven and contested implementation or enactment of global discourse in education systems and organizations. Most scholars of global education policy reject a linear understanding of policy processes as moving in unidirectional fashion from discourse, text, to implementation or enactment. Some, like Luke and Hogan (2006, 171), define educational policy-making "as the prescriptive regulation of flows of human

resources, discourse and capital across educational systems towards normative social, economic and cultural ends." Others, such as Ball (1994), have conceptualized a "policy cycle" consisting of multi-directional and non-linear relationships across agenda setting, policy text production, and policy enactment. Ball utilizes the term "enactment" rather than "implementation" (Ball et al. 2012) to highlight how the agency and engagement of a variety of actors at global, national, provincial, systemic, and institutional levels of policy processes shape and modify policies as they move between discursive constructions and practice. As Ball (2013, 8) suggests, "Policies are contested, interpreted and enacted in a variety of arenas of practice and the rhetorics, texts and meanings of policy makers do no always translate directly and obviously into institutional practices." Furthermore, there is an important distinction between policies as meta-discourses that shape what can be thought (policyscapes); policies as formalized rules and regulations; and policies as socially constructed enactments that span text and practice. Policy involves all three layers of action, including processes both before and after text production, and sometimes including formal evaluation processes (Taylor et al. 1997).

Scholars in the field of comparative and international education and global education policy have sought new theoretical and methodological approaches to help inform their analysis of global education policy. In this volume, chapters by Junemann, Ball, and Santori, and Carney build upon Appadurai's (1996) notion of globalization as the acceleration of different types of flows of people, resources, and ideas, and Foucauldian approaches to discursive power, in elaborating the notion of educational "policyscapes" (see also Carney 2009). Dale and Robertson (2002) and Verger (Chapter 3, this volume) draw on social geography to explore the respatialization of political power, using the notion of policy interplay across "scales" (see also Brenner 2004). Mundy, Verger, Martens, Jones, and others use the term "global governance" as a frame for highlighting the different forms of individual and institutional agency that play a role in constructing a nascent global policy. Drawing on international relations theories and political science, such scholars have attempted to bring greater focus to the organizational architecture that anchors global policy processes.

Researchers have also increasingly focused on the dynamics of policy learning and persuasion that surround global policy discourses, focusing on their uneven and differentiated outcomes (Grek *et al.* 2009; Ball 2012; Mundy and Murphy 2001; Olmedo 2013). Contestation and reinterpretation of policy occur across global/national and national/provincial/local relations in educational systems, and work very differently in relation to developed and developing nations. Networked governance, the localization of global policies, and the continuous reinterpretation and construction of the promise of educational progress by actors at all levels of the global polity are among the key issues raised in this volume.

Convergence, Divergence, Coercion - Borrowing or Learning?

Among the key questions addressed in this volume are why, how, and to what extent national governments have been induced to allow the globalization of policy in an area widely regarded as a national preserve. Empirical research in the global education policy field suggests that national institutions and domestic politics are

key to understanding, on the one hand, the uneven level of diffusion and penetration of global education policy ideas in different territories, and, on the other, the re-contextualization and (on occasion) the drastic transformation of such global ideas within local institutions, networks of rules, and local practices. How far policy and practice are actually converging globally as a result of these multiple processes is still much disputed within the literature on global educational change, and judgment depends to some degree on what level of policy and practice is being considered.

Dale (1999) has attempted to document the mechanisms through which policy ideas from international organizations influence national, provincial, and local policies in education, namely, imposition, harmonization, dissemination, standardization, and interdependence. Imposition works through funding conditionalities. International organizationss (as well as powerful states) impose their policy preferences on low-income and/or financially dependent countries via loan conditionalities, debt cancellation, and trade agreements, among other mechanisms (Dale 1999). Harmonization occurs when groups of nations agree to implement common policies in a specific policy domain; think here of the Bologna process in higher education in the EU. Dissemination is the exhortatory or suasion approach to influence and works through examples of best practice and the like (Simons 2014). Standardization is another important mechanism and can be seen in the international comparative testing work of the OECD and the IEA. Tests such as PISA, TIMSS, and PIRLS help constitute the globe as a commensurate space of measurement, creating what we might see as an epistemological mode of global governance through the alignment of global and national epistemic communities and learning standards (Sellar and Lingard 2013a; 2013b; 2014). Interdependence is another mechanism through which the influence of international organizations has effects within national and provincial policies and policy-making, for example, through globally established targets such as with Education for All (Verger et al. 2012; Benavot et al., Chapter 13, this volume).

One compelling answer to the question of why countries respond to global policies, at least in relation to the more developed countries, is that by the 1980s many national governments were experiencing similar dilemmas with respect to their education systems for which they sought new solutions. Many governments embraced public sector reform ideas developed by international bodies such as the OECD in the hope that they would address these problems, or at least provide the impression that policy-makers had solutions (Pal and Ireland 2009). Here, international organizations, more than imposing policies, would work as forums that, in an apparently technical and neutral way, helped countries to identify (and consequently to emulate) the education strategies of the most successful performers (see Schleicher and Zoido, Chapter 20, this volume). Less developed countries often had less choice in the matter, since aid from international organizations is often tied to the adoption of policies favored by these organizations and their most powerful members. But even, and perhaps especially, in these cases policy-makers have been prone to the voluntary adoption of the discourses of global policy, either because they lacked experience of effective national policy-making themselves and had no other solutions, or because using the language of global policy added political credibility, even where the policies could not, or would not, be actually implemented.

However, such a highly rationalistic and voluntary portrait of national engagement in global policy processes has been much disputed in the empirical literature. Sociological institutionalism and world culture theory agree with the broad argument made by rationalists about global policy convergence, but are skeptical about the mechanisms that drive such convergence. Rather than an aggregation of goal-oriented rational choices by well-informed policy-makers, sociological institutionalism argues that countries adopt global policies not necessarily because they need them, or because they are effective, but as a result of the "transmission of cultural practices" (Hall and Taylor 1996, 14) and the legitimation pressures that governments receive to demonstrate to the international community that they are building a "modern state" (Drezner 2001). In comparative education, world culture theory argues that a single global model of schooling has spread around the world, to a great extent due to the voluntary adhesion of countries to global standards (including human rights, the environment, or transparency) that prescribe for governments the most appropriate ways of organizing their educational systems (see Ramirez et al., Chapter 2, this volume). Despite being criticized for oversimplifying global diffusion dynamics (cf. Carney et al. 2012), some of the claims of world culture theory about isomorphism are warranted; countries, for instance, do indeed increasingly adopt globalized curricula and utilize policy discourses that make reference to human rights, accountability regimes, gender equality, norms of international citizenship, environmental sustainability and so on. Bromley, in Chapter 26 of this volume, adopts such an approach to understand the global dissemination of managerialism in education. According to her, important elements of global educational administration and policy are best understood through a cultural lens, including a focus on cultural rationalization processes through which the appropriate and legitimate behavior of individuals in the context of organizations is being redefined globally.

The idea that globalization has spawned policy convergence is one that continues to generate much debate among education policy scholars. Skeptics argue that convergence at the level of discourse does not equate to true enactment of converging policies – that is to say, in common patterns of resource allocation, institution building and reform. For example, Carnoy, in Chapter 1 of this volume, maintains that most countries have more political and financial space to drive how globalization is brought into education than hyperglobalist theories, including world culture theory, claim. Much recent empirical work in comparative education has focused on the ways in which policies change as they travel across different political, social, and geographic contexts, and how they are variously and uniquely taken up in national policy settings. According to Peck and Theodore (2010, 170), global policies mutate during their journeys; they "rarely travel as complete packages, they move in bits and pieces – as selective discourses, inchoate ideas, and synthesized models – and they therefore 'arrive' not as replicas but as policies already-in-transformation."

Steiner-Khamsi (2004 and Chapter 32, this volume) uses the terms "indigenization" and "policy-borrowing" to capture the strong role of national and subnational players in shaping engagement with global policy ideas (Steiner-Khamsi 2004); while others focus on the "vernacularization" of global policies (Rizvi and Lingard 2010; see also Chapters 31 and, 28, this volume). Research on policy borrowing and lending has shown how governments strategically focus on the adoption of those external recommendations that are closest to their particular preferences.

Low-income countries tend to adopt the language of the powerful in order to have access to international resources, and use the supposed neutrality of global policies to legitimate their own political agendas at the domestic level (Steiner-Khamsi 2004; 2012). Such research highlights the fact that it is quite likely that the same globalized policies can lead to continuing policy differentiation between countries, and groups of countries, where national policy-makers adopt only those international policies which are deemed politically and culturally "sympathetic" and which produce the best fit, given their national institutional and political histories and traditions.

Historical institutionalism – an approach that emphasizes the path dependencies locked in by national institutions (Hall and Taylor 1996) – is a framework taken up by many education policy scholars to explore how the political architecture of a country can work in a very different – and even contradictory – way when it comes to retaining new education reform ideas (Fulge et al., Chapter 25 this volume; Takayama 2012; Simola et al. 2013; Verger 2014). In this vein, the "varieties of capitalism" approach adopted by Busemeyer and Vossiek in Chapter 8 of this volume, suggests that "existing socio-economic institutions shape the skill formation strategies of businesses and households, which in turn leads to the development of different kinds of national innovation strategies." Thus, policy convergence has not resulted from common global economic pressures. Particular features of a state's political architecture, including federal or unitary structure, the role and presence of veto points, and the level of independence between the executive and legislative branches of government, can also be key to understanding the uneven adoption of globally supported policy reforms – as for example in the case of voucher reforms, where liberal countries such as the US and the UK (who share an apparent positive ideological predisposition toward market reforms) have taken up less ambitious voucher schemes than a social-democratic country such as Sweden (Klitgaard 2008; Wiborg 2013).

That patterns of convergence or divergence in adoption of global policies are highly idiosyncratic is further highlighted by a recent study of 25 OECD countries by Green and Mostafa (2013). This study found that not only is there no significant convergence in 13 of 25 policy arenas measured, trends were also often not in the direction predicted in global education policy discourses. For instance, countries were converging on greater centralization of decision-making (as opposed to school autonomy); in reducing inequality among learners (in terms of learning outcomes); and in increasing the proportion of schools that were fully publicly funded – while increasing private resourcing of higher education. Overall the authors conclude that, although there are many areas where real convergence has been apparent, there are many others where there has been no convergence, and even in some cases divergence. Much of what is considered as "convergence" in the literature is either only a convergence at the level of general policy rhetoric, or it is a case of countries traveling in the same general direction but, given their different starting points, remaining as far apart from each other as ever on any particular measure.

Key Actors and Debated Issues in Global Education Policy

A large share of the chapters in this volume concentrate on the evolution of international organizations and the global policy architecture and policy flows they anchor. In this section, we provide a brief overview of these organizations and some of the policy ideas – and policy debates – to which they have been central. As we have noted above, perhaps the two most influential global policy actors in education are the World Bank and the OECD. The influence, size, and technical sophistication of the education policy work undertaken by these two organizations far overshadows that conducted by UNESCO, the intergovernmental agency with the key mandate in global education policy.

By the 1980s, the World Bank had emerged as the single largest source of international finance for educational development, and as the most powerful global thought leader in education, particularly for developing countries. Heavily influenced by the USA, the Bank framed educational development as a set of strategic investments in human capital for purposes of economic growth, and has heavily promoted the use of market-like mechanisms and competition to ensure educational efficiency (Jones 1992; Jones and Coleman 2005; Mundy 2002; Resnik 2006; Woods 2000). In the 1980s and 1990s, the Bank was influential in designing a reform agenda for countries facing debt crises due to the loss of cheap international credit, advising governments around the world to restructure their education sectors by lowering subsidies to tertiary level education and introducing user fees at this level; and to introduce efficiency-driven reforms through the use of contract teachers, lowering of repetition rates, and enhanced parental and community "participation" in school level costs (Hinchliffe 1993; World Bank 1988; 1995).

The OECD emerged as a key educational policy player in the context of competition between the Soviet Union and the USA, which helped to produce a strong strategic interest in strengthening educational systems. Education, however, initially had an inferred role in the OECD's work (Papadopoulos 1994) and did not have a separate Directorate (Directorate of Education and Skills) until 2002. Building upon the foundation of voluntary collaboration and mutual problem solving, from the 1970s onward the OECD was able to encourage governments to fund new joint ventures - including the creation of standardized performance benchmarks of education systems, and somewhat later, the development of voluntary programs of international assessment and cross-national comparison among Western educational systems, which members opted into and paid for themselves (Papadopoulos 1994; Lingard and Sellar, Chapter 19, this volume). The ascendance of education at the OECD began in the mid-1990s with the ratification of new policy positions on lifelong learning and knowledge economies and the creation of the Indicators of Education Systems (INES) program and the publication of Education at a Glance (Henry et al. 2001). Resnik (2006) has shown how the voluntary membership in intergovernmental organizations like the OECD taught member governments to "think" about the relationship between education and the economy in new ways - in terms of investment in human capital for greater economic growth, rather than as simply a social service. First administered in 2000, the OECD's PISA program, along with the testing work of IEA, pioneered the voluntary engagement of nation states in international benchmarking of educational outcomes, a phenomenon that is spreading rapidly to other regional organizations, such as the EU, where joint educational initiatives have grown substantially (Lawn and Grek 2012; Grek 2013). By modeling a new approach to doing education policy "by numbers" in ways that limit more direct engagement of citizens in educational decision-making, the OECD (many education policy scholars argue) has played a crucial role in the emergence of neoliberal global policies for education (Dale and Robertson 2002; Henry *et al.* 2001).

Yet, as Lingard and Sellar and Fulge et al. show in Chapters 19 and 25 of this volume, it would be wrong to conceptualize the OECD as holding uncontested or unmediated power over educational policies in member and non-member countries. There is both contestation within the OECD itself and mediation in the take-up and impact of its policies. The OECD's policy recommendations can be mediated by strong local policy coalitions to produce enormous variation in the uptake of specific policies (Martens and Jakobi 2010; Martens and Wolf 2009; Bieber and Martens 2011). Furthermore, in the education sector, when compared to the World Bank, the OECD has often taken a stronger stance on equity issues, and appears at times to be more closely aligned to social welfare state democracy than to neo-liberalism - for example, in its championing of the educational systems of Finland and Canada as models for high equity systems; in its work on early childhood education and the education of migrant populations (Mahon, Chapter 12, this volume; see also Mahon 2010; Mahon and McBride 2008; OECD 2006; 2012); and in its advocacy of education as a vehicle for enhancing social capital and social cohesion (see Green and Janmaat, Chapter 9, this volume). In tandem with the European Commission, the OECD also offered a novel solution to the challenges of economic globalization through the development of the concept of lifelong learning (European Commission 1995; 2001; OECD 1996).

Though the OECD and the World Bank form the institutional anchors of the new global policy architecture in education, it is important to recognize that this architecture is thicker - and much more diverse - than a focus on these two organizations might suggest. Among intergovernmental actors, the United Nations and its specialized agencies UNESCO and UNICEF continue to play a critical role in advancing the notion of education as a fundamental human right, often challenging more economistic approaches to education policy. UNICEF developed its own distinctive approach to educational development during the 1960s, targeting marginalized children and developing programs such as its "child friendly schools" initiative, which links education to children's rights and which spawned a large community of non-governmental child rights activities (Black 1996; Phillips 1987; Jolly 1991). These UN agencies are largely responsible - alongside the recently formed Global Partnership for Education – for the development and evolution of a global "education for all" movement that is highlighted in chapters in this volume by Aaron Benevot and members of the UNESCO Education For All Global Monitoring Report team (Chapter 13), as well as by Menashy and Manion (Chapter 17, comparing UNICEF and UNESCO), Unterhalter (Chapter 6, on gender) and Bajaj and Kudwai (Chapter 11, on education rights) (see also, Chabbott 2003; Mundy 2010).

An important aspect of this new era of global educational governance has been the rise of non-state actors as significant players on the global stage. As Mundy and Murphy (2001) and others have shown, transnational advocacy networks on such issues as human rights, debt relief, official development assistance reform, and antiglobalization have frequently taken up the issue of the universal right to education as one part of their broader advocacy efforts. Transnational advocates played substantive roles in pressing OECD governments to support a global debt relief initiative (the Highly Indebted Poor Country Initiative), which provided the fiscal

space for many governments to rapidly expand access to primary schooling (Hinchliffe 2004). They have played a critical role in stimulating public awareness of gender equity in education; often working in concert with UN based organizations (see Unterhalter, Chapter 6, this volume). Transnational advocates have been active too in protesting the inclusion of educational services in the liberalization supported by the World Trade Organization's (WTO) General Agreement on Trade in Services (GATS) where, according to Verger (2010), they shaped the degree to which policies promoting the liberalization of international trade in educational services have been adopted by nations. There are also many instances in which national civil society has effectively utilized the global framing of education as a human right to protest the educational policies of their home governments: in Chile, for example, during the 2011 student led movement for equitable access to higher education and in the 2013 movement for social equity in Brazil. Verger and Novelli (2012) provide similar examples in their study of national education coalitions in low and middle-income countries. Chapter 22, by Macpherson in this volume, compares two non-state actors in education – the Global Campaign for Education (GCE) and Inter-Agency Network for Education in Emergencies, the former of which played an important role in a successful campaign to abolish primary school user charges in Tanzania and other African states.

Perhaps in tension with the rising consensus about basic education as a global public good worthy of official intergovernmental action has been the rise of transnational actors engaged in expanding the market for educational services. The creation of the WTO and GATS, alongside the rapid expansion of demand for certain kinds of educational services (particularly technology training, and higher education), have opened new opportunities for cross-border provision by transnational corporations and higher education institutions, which in turn press for liberalized access to educational markets (Verger 2010; Bhanji 2008; 2012; Ball 2012; Au and Ferrare 2015). Robertson et al. (2006), among others have noted how the efforts to liberalize higher education dovetail with a new emphasis on international rankings and quality assurance in higher education, spearheaded and supported by both international organizations and private actors (see also Robertson et al. 2012). Bhanji has documented the role played in particular by software corporations in shaping a new global marketplace of education and training services (2008; 2012; and Chapter 23 in this volume). Less well known is the development of a significant transnational network promoting low-fee private schooling as an alternative to publicly provided education, which brings together new players, including among others the Pearson corporation (a leading provider of educational services and materials), the Omidyar Foundation, and the private sector arm of the World Bank, the International Finance Corporation (Verger 2012; Ball 2012; Nambissan and Ball 2012; Mundy and Menashy 2012), and which promote the expansion of private education in many parts of the world. In Africa, it is contributing to schooling in rural communities, but mostly through low-quality education services provided by small-scale entrepreneurs. The rise of new, technologically enabled educational services - think, for example, of the Massive Open Online Courses (MOOCs) - will no doubt intensify the opportunities for for-profit entrepreneurship in trans-border educational services, deepening the challenges to territorially based education systems.

The current and potential role of emergent world powers is an area ripe for further attention in the study of global education policy. Since 2000, several of the most powerful emergent economies have established bilateral programs of foreign aid for education – including among others, China, Russia, Brazil, Turkey, India, South Africa, and South Korea, as well as some countries in the Middle East. Many of these emergent powers are also longstanding members of the major multilateral organizations engaged in education, where they have been active in calling for governance reforms to reflect the changing balance of power between Western and non-Western nations. These rising powers are primarily focused on expanding their spheres of geopolitical influence on a bilateral basis. Characterized by sharply differing national approaches to economic and social development, they share a limited appetite for international regimes that constrain national sovereignty (including in such putatively domestic spheres as education).

Yet the growing voice of emergent economies in global decision-making is illustrated by the development of the Group of 20 (G20), which has now replaced the G8 as key global summit on world financial and economic matters. As Kumar (2010) explains, emergent economic powers have insisted that the G20 officially adopt "international development" as a specific area of attention, despite the preference among Western industrialized governments that the G20 concentrate primarily on global financial and economic governance. However, the only reference to education in recent G20 communiques refers to education for economic development and skills formation, reflecting a focus on working together to advance science, technology, and skills to advance their own economic competitiveness. Furthermore, the tendency of emerging powers to tie foreign aid to their own economic self-interest – particularly in resource-rich African countries – suggests that they may contribute more to the erosion of the existing "global compact" than to its amplification (Nordveit 2011; Brautigam 2010; Gu et al. 2008; Bracht 2013; Rodrik 2013; Cammack 2011; Woods 2008).

Overview of the Volume

This Handbook is being launched during a period of world history that has been described as one of "leaderless" globalization – a period in which the USA and the Western world are losing their unique ascendance. Yet as illustrated by chapters throughout this volume, the reach of a distinctly Anglo-American global imaginary for education has retained its power in almost every domain of global educational policy. Because of this context, the Handbook pays particular attention to new actors and new forms of agency and contestation that have the potential to re-envisage and reshape the future of education policies around the world. In doing so, the volume explores not only global level policy discourses, but also regional and national dimensions of policy diffusion, borrowing, learning, and debate.

The Handbook is organized into four sections, each with its own short introduction. In Section 1: Education and a Global Polity, chapters focus on broad trends and drivers of educational change over the past half-century. Chapters in Section 2: Educational Issues and Challenges look at a range of issue arenas for global educational policy, ranging from early childhood education to higher education, and including such debated topics as teachers' work, social cohesion, and the right to

education. Section 3: Global Policy Actors in Education takes a closer look at key policy actors, with chapters on the United Nations, the World Bank, the OECD, ASEAN, the private sector, and civil society. A final section, entitled Critical Directions in the Study of Global Education Policy, introduces cutting edge approaches to the study of global education policy, highlighting the vibrant theoretical and methodological debates and experimentation that have accompanied new efforts to conceptualize research on global education policy.

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Part I Education and a Global Polity

Part I Introduction

Andy Green

Part I provides an introductory overview of the key contemporary debates concerning educational globalization and global education policy. The chapters consider the origins and drivers of educational globalization from the 1980s onwards; the processes through which global policy discourses emerge and are (selectively) adopted and transformed in national settings; and how far this is leading to convergence in education policy across the world. A number of chapters elaborate and evaluate some of the major theories and concepts that inform global education policy; including human capital theory and the role of skills in economic growth and poverty reduction; notions of educational quality, accountability, and good governance; and the discourses around privatization, cost-efficiency, and cost-sharing in education. Critical perspectives are offered on the dominant global policy discourses on human capital and gender equity in schooling; as well as on the claims made regarding the effectiveness of the policies of the global education reform movement on school accountability, diversity, and choice, and the use of competitive quasi-markets in education. The part ends with an examination of the evolution of the diverse types of skills formation systems found in Europe, thus returning the discussion to the questions raised in the first chapter about the continuing salience of national education policy-making in the face of policy globalization, and thus the limits of policy convergence.

The first three chapters provide contrasting accounts of the processes of educational globalization. In the first chapter, Martin Carnoy explores the origins of educational globalization and the relation of global education policy to national decision-making in education. Assuming that policy-makers act rationally to achieve favored goals within given constraints, and that educational policies and objectives tend to be contested at the national level, Carnoy argues that global policy develops primarily due to different national elites adopting similar solutions to a number of common problems facing education in different countries. Ideological convergence amongst global elites also arises to some extent out of the diffusion of dominant notions of modernity, but only where these are functional to elite interests. Intensified global economic competition since the 1980s, and the rise of the global "knowledge economy," increases the importance of skills, research, and innovation in sustaining the national economic competitiveness upon which government legitimacy rests. At the same time

governments face increasing budgetary pressures arising from the ageing of populations and the need to maintain internationally competitive taxation regimes. In order to meet the rising demand for skills and qualifications, from both students and enterprises, governments seek new ways to offset the rising costs of education to the state through various efficiency and cost sharing measures. Global policies for improving educational efficiency and quality – including through accountability regimes, the proliferation of educational testing, and the adoption of new technologies in education delivery – are adopted by national policy-makers as ways to solve these common problems. Yet, as Carnoy reminds us, national elites also have to respond to domestic political pressures, which can vary substantially between countries, and they may respond differently to the proffered global policy solutions. Global policy is thus adopted selectively, and not all policies converge at the national level.

The following chapter provides a quite different perspective on global policy development, which focuses less on different national contexts and attendant power relations that shape national responses to global policy. Writing within the tradition of World Culture Theory, Francisco Ramirez, John Meyer, and Julia Lerch present the development of global policy as a process of cultural diffusion, which they say is largely consensual and stateless in form. Global and national policy actors at different levels adopt similar policy discourses out of a desire to conform to global norms of modernity. In this model world society spontaneously develops a global discourse around the virtues of expanded, progressive, and internationalized education systems. Education is globally cast as a key to progress or excellence and justice or equality. Everywhere policy-makers promote increased participation at all levels of education; adopt curricula that seek to foster transnational citizenship and human rights; and adopt "dense" organizational control mechanisms to enhance the efficiency of their systems. A degree of "loose coupling" between global policy rhetoric and actual practice in national states is acknowledged as inevitable, but national variation in educational practice is seen not so much as evidence of continuing nation state efficacy in education policy-making, but rather as a necessary friction involved as powerful global policies are gradually infused into different contexts.

Antoni Verger reviews the variety of different perspectives on the emergence and adoption of global education policy, using privatization policy as a test case. Privatization policy - defined in its broadest terms to include private public partnerships and the contracting out of services, as well as full private ownership of schools – is taken to be an example of a pervasive global education reform approach that induces policy convergence at the national level, albeit around a broad array of policies. National policy-makers are seen to be key players in the process of global policy diffusion but Verger remains skeptical about rationalist claims that they act rationally and in the light of the evidence of what works. The normative emulation thesis of World Culture Theory pays attention to the power of ideas but is also criticized on the grounds that it takes insufficient account of the conflicting political interests at the national level and the processes through which global and national policy-making interact in setting education agendas. Drawing on theories of "critical constructivism" and "cultural political economy," which stress the power relations underlying policy choices, the bounded nature policy rationalism, and the salience of the "semiotics of policy adoption," Verger argues for a more detailed consideration of the interactions involved in the multi-scalar policy process and, particularly, for

more attention to be paid to the complexities of policy adoption at the national level, with its key moments of policy selection, variation, and retention.

Chapter 4 addresses the key economic arguments underlying global education policy, in the form of the Human Capital Theory (HCT) claims about the contribution of skills to earnings, productivity, and growth. Reviewing the development of HCT and its impact on education policy since the 1960s, Erik Hanushek argues that economists wrongly assumed that schooling was the only source of learning and that the outcomes of learning that promote productivity and economic growth could be adequately measured by levels of school attainment or years of schooling. Substantial variation across countries in the quality of schooling meant that the measures were inadequate and, consequently, models based on them produced inconsistent results and the wrong policy conclusions. However, with the development of direct tests of skills - as in the International Association for the Evaluation of Educational Achievement (IEA) and Programme for International Student Assessment (PISA) surveys – it became possible to model the economic impact of the learning outcomes that matter most: cognitive skills. Summarizing his (and his co-authors') pathbreaking findings on skills and growth from 2000 onwards, Hanushek shows that it is the cognitive skills of the adult population, rather than their school attainments, that are most powerfully related to individual earnings, income distribution, and economic growth. Using international data on skills and growth from 1960 to 2000, he shows that the impact of skills on economic growth is much higher than that of school attainment. After controlling for skills, years of higher education have no impact on growth in either developing or developed countries. Claiming that these relationships are causal – despite the still limited skills data for developing countries - Hanushek argues that the results have profound implications for education policy, making the question of school quality the central issue.

Xavier Bonal provides a critique of HCT and its influence on policy in Chapter 5 that ranges well beyond issues of measurement. This chapter provides a detailed account of the evolution of HCT and its effects on global policies for poverty reduction since the 1960s, criticizing many of its core premises and the policies they have supported. From the start, argues Bonal, HCT made unsupported assumptions about human behavior and failed to take due account of the effects of institutions. At the micro level, the rational choice models of individual decision-making it employed ignored the influence of culture and non-instrumental determinants of individual decision-making, consequently underestimating the barriers to rational individual investments in skills. At the macro level, it initially failed to take account of market imperfections and institutional failures, which would also undermine the assumptions on human capital investment. These flawed assumptions, argues Bonal, underpinned the limited range of World Bank polices on education and development - including the narrow priority given to investment in basic education, the heavy promotion of private sector involvement, and the stress on decentralization and cost-recovery policies - which were to have devastating effects. Policies for education and poverty reduction failed to address the central issue of inequality and had little effect. In the era of the "post-Washington consensus," argues Bonal, there has been a growing recognition of market imperfections and of the importance of institutions and good governance, and development policies are more sensitive to issues of inequality and social cohesion. However, there has remained a reluctance to introduce radical changes in policy, with pro-equity measures still based on a flawed market logic.

Chapter 6 shifts the discussion to gender and education and the connected area of girl's schooling, which, according to the author, constitute a field in which a nexus of relationships amongst disparate organizations have formed a global policy discourse stretching over many decades. Elaine Unterhalter provides a wide-ranging account of the shifts in policy discourse going back to the late 18th century. The chapter charts three distinct but overlapping phases, each characterized by particular formulations of ideas, and differing relationships of activists, state governments, and transnational organizations, which precipitate particular actions. The first phase, termed the women's rights phase, which stretches from the late 18th century, has its high point around the Beijing Conference on women in 1995 and then fragments into different strands of women's rights movements. The second phase, which concentrates on girls' access to schooling, begins around 1990 with the building of the Education for All (EFA) movement at the Jomtien conference, has a high point around 2000, the year of the adoption of an EFA goal on gender equality and girls' schooling and the presentation of gender parity in schooling as an indicator of women's empowerment in the Millennium Development Goal (MDG) framework. The third phase appears in a policy declaration in 2010, although its roots lie in the 1980s and 1990s. This is termed the "Beyond Access" phase, to signal that it is concerned with issues that emerge beyond the point of access to school. The analysis suggests different meanings of gender equity in education are struggled over, sometimes taking a direction that confronts injustice and the structures of subordination, but sometimes only dealing superficially with these relationships and weakening actions for change.

Next, Chapter 7, by Pasi Sahlberg, describes the origins, policies, and impact of what he calls the Global Education Reform Movement (GERM). Like Martin Carnoy, he sees the origins of the globalization of education policy as being located in the 1980s, when the education "superpowers" - including England, the USA, France, Germany, the Netherlands, and Sweden - came to doubt whether their education systems were adequate for them to lead the way in innovation and economic competitiveness. The 1983 A Nation at Risk report in the USA sounded the alarm bells, but, according to Sahlberg, it was the 1988 Education Reform Act in the UK that provided the blueprint for further large-scale school reforms in North America, Europe, and the Asia-Pacific, and the English-speaking countries continued to be the main conduit for reforms. These all followed a simple quasi-market logic whereby standards would be driven up by increased competition between schools made possible by greater school diversity and choice, more public information on schools, and greater school autonomy. With greater autonomy for schools, there followed the need for more accountability provided by standardized national testing of students, teacher appraisal, and merit-based pay systems. The paradoxical result of these reforms was a generalized standardization of learning which, argues Sahlberg, narrows the freedom and flexibility of schools to teach in ways which make sense to them, prevents teachers from experimentation, and reduces the use of alternative pedagogic approaches. As evidence that the policies have not worked, Sahlberg invokes the trend data from PISA, which show that in the seven countries that he claims have adopted GERM policies most fully (Australia, Canada, England, the

Netherlands, New Zealand, Sweden, and the USA) average achievements in numeracy declined between 2000 and 2012. The chapter ends by noting that most of the recent educational success stories have been in countries like Finland, South Korea, and Singapore, which have not generally followed the GERM prescriptions for school improvement, and by calling for an alternative reform agenda to promote quality and equity based on teacher professionalism, relations of trust within schools, and collaboration between schools.

The final chapter in Part I, by Marius Busemeyer and Janis Vossiek, returns to the dilemma of policy convergence and national system variation raised in the first chapter, arguing that existing institutions and historical legacies prevent full-scale global convergence. Drawing on the theories of institutional path dependency developed within "historical institutionalism" and the Varieties of Capitalism school, the chapter analyses the variant institutional logics that underlie different types of skills formation system. Focusing on the recent developments in the contrasting systems in the "coordinated market economy" of Germany and the "liberal market economy" of the UK, the authors find continuing evidence of path dependent change, even through an era of globalization, indicating a mixed pattern of institutional change and stability. The authors challenge the notion that only neo-liberal institutional forms can flourish in a global world, arguing that globalization is likely to contribute to the rise of new institutional hybrids rather than to full-scale convergence.

Educational Policies in the Face of Globalization: Whither the Nation State?

Martin Carnoy

The role of the national state in shaping national economic and social policy has, according to both academics and popular thinking, been sharply constrained by economic globalization (e.g. Castells 1997; Friedman 1999; Giddens 2002). Another line of argument is that globalization is producing "convergence" in norms and values (institutional culture) concerning human rights and social policies, such as equity, norms of social efficiency, and democracy (Meyer *et al.* 1992; 1997). Of particular interest to us is whether and how the constraints and influences imposed by economic globalization and ideological convergence apply to educational policy-making and the shape of educational systems themselves.

In this chapter, I restate an argument I made a number of years ago (Carnoy 2000) that economic globalization does indeed put new pressures on national states. I contend that competition generated by new rising economic players in the system and the specialized skills demanded by high value information technology, financial services, and organizational innovation services induce national states to expand their educational systems, particularly higher education.

Second, I argue that ideological convergence as developed in the world system approach to institutional change is partly the result of spreading elite notions of "modernity," but that these elite notions of modernity develop and spread because they are functional to elite interests, including reproduction of elite power and specific economic interests. Particular reforms of educational systems are also promoted by international agencies representing those interests but also incorporating their own "non-profit" economic interests. That is, "convergence" may appear to emerge from the autonomous diffusion of institutional norms "caused" by increased interaction among individuals in an increasingly globalized and technologically

connected environment. Yet, the convergence that does occur is selective, and the selection is the one promoted by powerful global economic interests.

Finally, I make the case that even with all these economic and ideological pressures, there are a great variety of national approaches to educational policy, and these approaches are highly conditioned by how national societies define social efficiency and by the historical paths of national politics.

The National State, Globalization, and the Expansion of Education

Is the power of the national state diminished by globalization? Yes and no. Yes, because increasing global economic competition makes the national state focus on economic policies that improve global competitiveness, at the expense of policies that stabilize the current configuration of the domestic economy or possibly social cohesion (Castells 1997). Yes, because the national state is compelled to promote economic growth to assure its own legitimacy and therefore to make the national economy attractive for the mass of capital that moves globally choosing "winners" over "losers," and that may mean a reduction of public spending and the introduction of monetary policy that favors financial interests rather than workers and consumers (Castells 1997).

But no, because ultimately national states still greatly influence the territorial and temporal space in which most people acquire their capacity to operate globally and where capital has to invest. National states are largely responsible for the political climate in which businesses conduct their activities and individuals organize their social lives. Some analysts have called this underlying context for social and economic interaction "social capital" (Putnam 2000). Others have focused on trust (Fukuyama 1995). National public policy has an enormous influence on social capital and trust. Even the World Bank, supposedly a global institution, has rediscovered the national state as crucial to national economic and social development (World Bank 1997). It makes a major difference to a nation's economic possibilities when the national state is capable of formulating coherent economic and social policies and carrying them out. It makes a major difference if the national state can reduce corruption and establish trust, and it is difficult to imagine achieving greater social capital in most places without a well-organized state.

Ultimately, the state is concerned with its own reproduction. To reproduce its political power, the state bureaucracy seeks political legitimacy even when it is a non-democratic regime. In the past and now even more in a globalized knowledge economy, achieving political legitimacy includes not only stimulating economic growth, but also providing education to the mass of a nation's population.

Increasing Demand for Education in a Globalized Environment

In a globalized environment, the pressure for states to engage with education has increased. Globalization means increased competition among nations in a more closely intertwined international economy, a competition that is continuously enhanced by more rapid communication and computer technology and by a way of business thinking that is increasingly global rather than regional or national. Globalization also means relatively free trade, rather unregulated movement of

finance capital, and the increased movement of innovative ideas (knowledge) and labor across national borders.

Major new players have emerged in the world economy, such as China, Korea, Taiwan, Brazil, and India. They are breaking the dominance of the USA, Europe, and Japan in manufacturing, although for the moment, firms (and universities) with their home base in the highly developed countries still have almost total control over the research and development of technical innovations.

One of the main outcomes of such competition and cross-border movements is a worldwide demand for certain kinds of skills – namely language, mathematics reasoning, scientific logic, and programming – associated with higher levels of education. Globalized science-based technology firms are increasingly using scientists and engineers trained at least partially in the emerging economies' universities to staff their innovation activities both in the developed countries and in the emerging economies themselves. At the same time, national states, particularly China, Korea, Taiwan, and Singapore, are increasing their scientific and technological higher education rapidly in the hope of capturing innovation rents as innovation continues to globalize. These forces tend to affect almost all countries in the global economy in the same way.

The tendency for the state in the new competitive global environment is to focus on education policies that enhance its economy's global competitiveness. An important influence of globalization is to increase the relative value of higher educated labor (or decrease the value of less educated labor). Thus, the private rates of return to higher education are rising in most countries and, in many, now exceed the payoff to lower levels of schooling (Carnoy *et al.* 2013). We need to remember that when the payoffs to higher education rise, this increases the demand not only for places in higher education, but also for lower levels of education and for increased *quality* of lower levels of schooling so students can better compete for university places. The state's legitimacy is entwined with its capacity to expand and improve the educational system as a whole.

More recently, state legitimacy includes improving the quality of mass education, particularly in terms of student scores on international and national assessments. Economists have tried to link higher educational attainment (Barro 1991; Krueger and Lindahl 2001) and educational quality (Hanushek *et al.* 2013) to economic growth. Such links help governments justify more investment in education, but even if those links prove to be rather vague, the increasing demand for expanding education forces governments to respond. This push for more education has also come to include demands for greatly expanding higher education and, in the larger economies, investing in a prime symbol of knowledge economy prestige, the "world class" university (Altbach *et al.* 2009).

There are other global economic forces that act similarly across countries. For example, constraints on public spending from aging populations limit educational expansion and attempts to improve educational quality. Increased competition in the global economy has made it more difficult for both developed and developing nations to raise revenue through increased taxation, particularly on corporate profits and individual income, because governments fear the flight of capital or not being able to attract capital investment. Further, many of the world's governments have low capacity to collect income taxes, so rely on excise taxes (value-added tax (VAT),

import tariffs, export taxes). Finally, governments are under pressure from international financial institutions, such as the International Monetary Fund (IMF) and the World Bank, to keep public spending low. A major part of the IMF package for countries preparing themselves for "sustained" economic growth is to reduce the size of public deficits and shift national resources from government control to the private sector. This, in turn, means keeping public spending low relative to the size of the private sector.

National Variation in Response to Global Pressures

Nevertheless, there is considerable variation in the way states respond to the growth of demand for higher skills and to the financial constraints imposed by highly mobile capital seeking the best "deal" in terms of low wages and low corporate and income taxes. This suggests that there is an important *national* component to how nations expand their systems and reform them. Two important factors in defining national approaches to education are (a) how much national societies value the social payoffs to education; and (b) how much societies value social equality and how much they view the state as the main force for equalizing opportunity and outcomes.

The social payoffs to education are the positive effects of an educated population on civil society, tolerance for dissenting views, political stability, strengthened democracy, treatment of women and minority groups, and overall economic productivity - more educated people tend to make their co-workers more productive as well. It is therefore generally agreed that primary and basic secondary education should be heavily subsidized if not altogether free, so that no child in the society would be prevented from accessing those levels. Even at the university level and even when university graduates generally belong to a privileged socioeconomic group, the case has been made politically for publicly financing such students to earn higher incomes at public expense. The contention is that high social class individuals increasing their human capital at public expense also increase everyone else's well-being by becoming good doctors, good engineers, and good leaders. These large benefits, it could be claimed, accrue to the society as a whole, not just to the graduates themselves. One of the main arguments used for investing much larger amounts per student in elite or "world class" institutions is that their graduates and the research done there will have large "spillover" effects for society as a whole.

Social equality plays a role in the debate as well: lower social class families may face especially large financial, informational, or other barriers to entry into secondary and higher education. If a society values fairness and places social and political value on ensuring desired levels of equity of access and more equitable economic and social outcomes, the public aspect of education would include financing it in ways that remove such barriers. In addition, taxation and spending policies on public investments would tilt toward greater social equality. This equity/equality argument has been extended to make education as a whole – including higher education – a human right, situating it completely in the public space, available for all at public expense. Again, social preferences for equity/equality are mediated through the state. Depending on power relations in the state, it can interpret how education is to be financed as a public or private good.

Societies vary considerably in how they view the social value of education and social equity and equality. To the degree that states reflect these varying views and

are not able to maintain legitimacy by just imposing the views of the global elite, they are likely to vary in their responses to global forces.

Ideological Convergence

One of the most intensive lines of sociological research in the past four decades has revolved around the concept of global ideological convergence across a broad array of social values, including human rights, women's rights, universal primary education (mass schooling), and the importance of science and mathematics. The argument for mass schooling as a world model that infiltrated one nation state after another, rather than the result of local national responses to "solve problems of social order ... or to maintain dominance of elites," encapsulates the underlying concept of institutional convergence (Meyer *et al.* 1992).

The underlying theory of this ideological convergence is that elites implicitly came to agree upon a model of the nation state that had certain features, and one of those features was mass education. Thus, a converging ideological conception of the "modern" nation state was the driving force for defining educational change. Similarly, in the global information society, there is an emerging conception among global/national elites of the institutional nature of "modern" societies. In that sense, national states have "control" over their policies, but they are inexorably driven to "conform" to global institutional norms in order to meet a particular, global elite-defined conception of a "well-functioning, modern" state. State legitimacy in the eyes of global elites has real political meaning and, this theory claims, overrides the power of local economic, social, and ideological forces as an explanation for educational policies.

It is difficult to disagree that changing conceptions of the modern nation state have gradually diffused globally to influence national policies regarding educational expansion, gender equality, and, more recently, notions of educational quality, which include the spread of testing and measurement. To what degree diffusion is the outcome of the "autonomous" spread of ideology or of changing economic conditions that affect the functionality of these policies is an important question, not dealt with satisfactorily by the world system convergence theorists.

Ideological Convergence or Changes in Reproducing State Legitimacy?

In this section of the chapter, I address the interpretation of the ideological convergence argument, mainly to understand why national societal values and politics play such an important role in shaping the impact of these "global" ideologies on education policy. Three important expressions of so-called educational policy convergence in a globalized environment are the expansion of higher education through shifting the costs of that expansion to families through "privatization"; the increasing focus on educational "quality" as an important factor in economic growth and improving social equity; and increasing focus on educational technology (computers/internet) as a key tool for improving teaching and learning and for equalizing educational opportunity.

As noted, in the current era, globalization has increased pressure on many nation states to expand their higher educational systems for very functionalist reasons; that is, the increasing private economic payoff to higher levels of education. Those increasing

payoffs have also expanded the possibility for nation states to make families bear an increasing share of the cost of that expansion. This has characterized the expansion, particularly in developing countries, and has been viewed as an ideological shift in the view of higher education as a public to a private good (Altbach *et al.* 2009).

The focus on educational quality and the spread of testing and measurement connected with that focus is intimately connected to elite ideological "convergence" on conceptions of the role of education in economic growth, social mobility, and income inequality. Yet, this ideology also spreads for two types of functionalist reasons – direct reasons, namely the potential for private profits for test and test materials producers associated with the vast education industry; and indirect reasons, namely growing income inequality and the increasing concentration of capital. Would education be the centerpiece of reducing inequality in a globalizing world economy marked by decreasing rather than increasing inequality? Measuring educational quality and using those measurements to fault "bad" education for a host of ills in society is highly functional to maintaining the highly preferred position of the very elites who spread this ideology.

In a similar vein, the diffusion of computers and internet connections into schools as a "solution" to "low schooling quality" and to "achievement gaps" between low-and high social class students is an ideology that has spread rapidly in the past 15 years, much as did the educational television phase of technology-assisted instruction in the 1970s. The most recent manifestation of this ideology is the Massive Open Online Courses (MOOCs). These, again, are posed as a "solution" to providing high quality yet inexpensive teaching-learning opportunities on a global scale to augment (or even replace) localized university classes. Again, the spread of this ideology is situated in the context of its functionality to elite economic interests: large potential profits to hardware and software producers. And, as in the case of testing and measurement, it feeds off growing economic and social inequality and the convenience of seeking solutions to that ill through technology rather than addressing inequality directly.

Education as a Private versus Public Good

As noted by many analysts, there has been a tendency in the past 20 years for governments to shift the cost of higher education to students and their families (e.g. see Altbach and Levy 2005), both through promoting the expansion of fee charging private higher education institutions and the implementation of tuition fees (cost sharing) in public institutions. This has been characterized as a shift in ideology, specifically a change in treatment of higher education from a public to a private good, and also the result of hegemonic neo-liberal influences pushing for markets in education (Marginson and Ordorika 2011).

In assessing these views, it is important to consider that education inherently serves both private and public interests (Levin 1987; Marginson 2007). It serves private interests by enhancing the capacity of individuals to gain economic and social benefits. It also has public value because more highly educated individuals are likely to increase others' productivity (Romer 1994) and to embrace the fundamental tenants of a tolerant democratic society, which benefits all citizens (Mill 1869). However, much of the value of externalities ultimately depends on ideology (what "society" defines as having social value), and ideology, in turn, depends on political power

relations. If the political decision process is truly democratic and pluralistic, and full information is equally available to all individuals, the value of externalities could closely reflect the sum of the values individuals living in a society place on them. But this democratic, full information political model is rarely realized. In most societies, economic power and state power are closely entwined. The state (the political system) places a value on externalities that reflect these highly unequal power relations and the asymmetric influence, even in a democracy, of economically powerful groups in defining the value of externalities associated with certain types of higher education.

In the context of our argument that globalization has changed the objective (functionalist) conditions for higher education – greatly increasing the demand for higher educated labor and the payoffs for those who complete university – we contend that such high (and rising) payoffs accentuate the value of higher education as serving private interests. This gives the state the option to shift higher education financing to (mainly elite and higher middle class) families without jeopardizing the state's political legitimacy. Social externalities associated with the expansion of higher education are still likely to be positive, and public pressure continues to keep higher education free. Yet, many national states under pressure to increase higher education access have opted to expand it rapidly through charging tuition in public institutions or allowing low-quality private institutions to take up this new demand with tuition-paying places rather than taking the slower route of free public education.

There could be global-level ideological dimensions to this choice, but the changing private value of higher education is a much more powerful explainer of state moves to directly charging families for the costs of higher education (Carnoy et al. 2013). At the same time, there is considerable variation in whether and how this move is implemented in practice, reflecting national political conditions and historical trends in higher education expansion. For example, Brazil's higher education system was already 60% private in 1970, well before globalization and the recent explosion of enrollment beginning in 1995. Even so, private enrollment grew again after 2000 to almost three-quarters of undergraduates by 2010 and public institutions remained tuition free. India also expanded enrollment mainly through the private higher education sector, but simultaneously implemented cost sharing in public colleges. China's and Russia's systems also expanded rapidly in the same period, but a significant part of the growth was financed by tuition in public institutions – in China's case for all students and in Russia's, only for half the students - those who scored lower on entrance tests. Significantly, China and Russia's states are less democratic and their university systems are more centrally controlled than Brazil's or India's, and the way that financing increased enrollment played out quite differently in part due to these differences.

Focusing on Educational Quality and Testing

Not many years ago, in the 20th century, educational attainment was the main focus of educational policy-makers concerned with economic growth and educational equity. As discussed earlier, the populations of most countries measure their and their children's academic success mainly by how far they go in school, not their scores on tests. For example, one of the ways that higher social class parents improve the success of their less academically able offspring is to make sure that they complete university.

One reason why many higher test-scoring lower social class students do not achieve social mobility is because they fail to continue their education as far as their higher social class counterparts. Logically, attainment and achievement are correlated, but as Samuel Bowles and Herbert Gintis pointed out years ago (Bowles and Gintis 1975), achievement is a far worse predictor of economic success than social class, in part because social class is a far more important predictor of attainment.

However, as average years of schooling expanded in almost every society, and as this did not decrease social and economic differences (although it may have contributed to economic growth), a subtle shift occurred in academic and policy-maker focus from educational attainment to educational quality. Education quality has long been a topic of discussion (see the debate on science education in the USA post-Sputnik), but the new ideological "convergence" on quality of education as an indicator of the wealth of nations, of the possibilities for economic growth, and of state legitimacy, has clearly gone beyond anything in the past.

The new emphasis on educational quality has been accompanied and promoted by the rapid spread of testing and measurement. Measuring and comparing school outcomes across countries and within countries has not occurred spontaneously. Rather, it has been pushed by international organizations such as the International Association for Evaluation of Educational Achievement (IEA) and the Organisation for Economic Co-operation and Development (OECD), by the World Bank, the Inter-American Bank, and the Asian Development Bank, by non-governmental organizations (NGOs) such as the Inter-American Dialogue, and by bilateral agencies such as the US Agency for International Development. All these organizations share a globalized view of education and efficiency, which includes a highly quantitative view of progress. They also share an explicit understanding that "better" education can be measured and that better education translates directly into higher economic and social productivity. With more intensive economic competition among nation states, the urgency of improving productivity is translated by these organizations into spreading the acceptance of inter- and intra-national comparisons on standardized tests of student knowledge (UNESCO 2005; OECD 2011; Hanushek and Kimko 2000; Hanushek and Woessmann 2008). The World Bank and other international and bilateral lenders have also pushed this new emphasis on test score measures of the quality of education through direct monetary incentives of additional foreign assistance for those developing countries that participate in international tests and develop national testing regimes (Kijima 2013).

Nations' average international test performance is playing an increasing role in the way the public in those countries view themselves educationally. The two major players in the international testing universe are the IEA, which began testing internationally in the 1960s and now produces the Trends in International Mathematics and Science Survey (TIMSS), and the OECD, which runs the Programme for International Student Assessment (PISA). The impact of these international tests on national educational policy is steadily increasing, and so is the number of countries that participate in one or the other, or both.

Are testing and measurement and the focus on quality of education (achievement scores) over quantity of education (attainment) the new ideological symbols of national "modernity" in the globalized economy? Is that the reason that more national states are implementing national testing systems, participating in international tests,

and putting emphasis on raising those scores? Perhaps. Yet, it is just as likely that national adoption of these "symbols" fulfills two important functions, neither of which is nearly as benign as sending signals to the rest of the world that a nation state has joined a newly defined "global modernity club."

The first of these functions is to reemphasize the role of the family and particularly of "better" schooling as the keys to solving the problems of poverty and social inequality. If it is widely believed that family effort and higher quality schooling can solve these problems, then other measures, such as changing the moral "norms" about how large income differences "should be" in a society and income redistribution through state taxation and spending policies become seen as unnecessary or even harmful to the overall national project of improving people's well-being. The evidence that increasing student test scores per se addresses poverty and social inequality, or even that increasing test scores significantly increases economic growth, is limited to very questionable correlational results. However, the political effect of successfully shifting public consciousness to schooling as the solution to social ills is more believable.

The global movement toward increased educational testing is framed by a long tradition in educational reform dating back to the turn of the 20th century that greater efficiency and control (accountability) is the secret to higher quality. The movement is synonymous with expanding educational access for lower social class youth. As lower social class youth flooded into US urban schools in the later 19th century, reformers such as Ellwood Cubberley called for greater efficiency – a discussion similar to the Taylorism movement taking place in industry (see Cubberley 1910; on Taylorism, see Braverman 1974).

Although articulated and justified in terms of their potential contribution of making education more efficient in terms of improving education, international tests are not necessarily consistent with measures needed for improving schooling. PISA, for example, is not linked to national curriculum standards. Rather, it is a measure of knowledge that experts believe makes youth more functional economically and socially in the current knowledge environment. It is true that cross-nationally PISA results are highly correlated with other test results, but its mathematics portion, for example, would not serve well for writing a mathematics curriculum.

Furthermore, other ways of using testing are linked more directly to school improvement. In the best of cases, school personnel participate in designing and applying the tests, and the tests are directly linked to knowledge transmission goals set either at the national or regional level. Important aspects of school efficiency can certainly be understood through such tests, but efficiency here is less concerned with resource allocation per se than with process and use of resources. In Chile, for example, national testing of fourth and eighth grade students was originally, in the 1980s, used simply as a way to stimulate competition among private and public schools competing for students and the voucher funds attached to each student. Available evidence suggests that this use of tests had no positive effect on student achievement. However, in the 1990s, the use of national testing linked to central government school improvement programs did apparently increase test scores in lower-scoring schools catering to low-income students.

Global notions of efficiency and measurement can therefore have a positive effect on educational output, and improving educational quality may have an effect on economic productivity. For these links to play out, however, policy-makers first have to pass notions of measurement through local filters and have as their specific purpose school improvement even if school improvement requires more resources, which is likely the case in most developing societies. The distinction between this type of application of measurement to raising efficiency and the use of testing to develop national policies for resource use with the intention of avoiding discussions of public resources available for education is subtle and is mainly rooted in how the state, rather than international organizations, interprets the role of measurement in conditioning educational change. In addition, higher test scores must be linked to an improved quality of life for students scoring higher on tests. Although we would all like to believe that better schools will result in better economic and social opportunities for graduates, this may not be the case in highly unequal societies that can only absorb a small percentage of these higher quality graduates into higher paying jobs. The success of any education policy in promoting economic growth and social mobility depends on national state economic and social policies.

One of the ironies of the efficiency movement in education is that test *makers* have a vested economic interest to have educational systems and schools change what they define as academic knowledge or even useful knowledge to fit the particular test they sell. There is big money in testing and in the associated materials related to the curriculum associated with tests, so much so that the test makers have a major incentive in trying to change national curricula to align with their tests.

Globalization and Information and Communications Technology (ICT)

The spread of computers and the internet globally is the most evident manifestation of the information and communications technology foundations of the new global economy. The driving force behind the incorporation of ICT into education is ostensibly to improve student learning and to prepare youth for a global economy in which education contributes to higher productivity. There are strong underlying economic growth motives here, fostered by increased competition in the global economy. Allegedly, nations that have higher scoring students will perform better economically. Nations with students versed in the use of computers and the internet will be more productive. There is a second type of economic driver for the use of ICT in education – one that also motivated the use of educational radio and television a generation earlier: with ICT, the argument goes, it is possible to deliver reasonably high quality teaching to large numbers of students at low cost.

Thus, a case can be made that ICT has an ideological component, particularly in education as a symbol of modernization. However, an important element of the incorporation of ICT into schools is functional to economic growth, potentially lowering costs of schooling (financial functionality), and is a source of profit for the firms that produce ICT – hardware, software, internet connections, advertising on the internet, and schooling itself (privately run distance education). The education industry is an immense source of business opportunity, as we have discussed in the privatization of higher education, the testing and measurement business, and, perhaps most of all, ICT.

It is well to remember, however, that "I" stands for information, and "C" for communications. There is no "L" for "learning" in ICT, and for good reason. Computers were designed to store, access, and process quickly massive amounts of information.

The internet was also designed to access information and communicate it worldwide in real time. Computers as learning devices have proved to be much less effective despite claims that the access and communication functions of computer software could be easily adapted to teaching-learning functions and that they could serve these functions at a lower cost than traditional face-to-face forms of teaching/learning. Indeed, there are many such adaptations. Yet, after many years and many attempts, the promised educational quality improvements and lower costs from computer applications have been elusive (see Carnoy 2012 for a summary).

Perhaps the most appealing use of ICT for teaching and learning and, simultaneously for integrating individuals into a unified conception of culture, is the newest form of virtual higher education and the most recent expression of the combined impact of globalization and ICT on education - the MOOC, or Massive Open Online Course. In theory, MOOCs could make available to a global student clientele courses taught by experts in particular subjects from the very best universities in the world using effective lecture techniques, high level curricula, and well organized evaluation activities (problem sets, tests, etc.). For students who are academically able and disciplined enough to work independently in such courses, they could create the possibility of much higher standards of knowledge transmission worldwide. It is argued that they could also boost the quality of second tier higher education institutions by giving students there the opportunity to study with the very best professors in the world at a distance. However, the main objective of using MOOCs in second tier institutions is likely to be to lower costs per student, not to raise quality. As we discuss below, states are under pressure to decrease the costs of higher education expansion. MOOCs could certainly play a role in accomplishing that goal without necessarily raising higher educational quality.

Is the widespread use of ICT and the increasingly generalized belief in ICTs as the expression of the information age version of modernized, "connected" society (or "network society," in Castells' (1997) terminology) the result of ideological convergence? Or is it functional to both state efforts to increase economic growth and state legitimacy, as well as simply functional to higher profits for computer and peripherals manufacturers?

It makes perfect sense to interpret the use of computers in schools as a product of ideological convergence, particularly since they seem to have little positive impact on children's academic learning (Carnoy 2012). Computers in schools are symbols of the information society – schools with computers and internet connections are certainly viewed by parents as academically innovative, and this view is pushed hard by international agencies, such as the OECD (OECD 2013b, chapter 5).

On the other hand, if we delve carefully into what aspect of "modernization" computers symbolize to parents, it is likely to be the notion that by using "high technology" in schools and at home, their children learn skills that will serve them in the workplace – that is, to help them get better jobs. The use and intensity of use of ICT are positively correlated with gross domestic product, and within a country, with individuals' social class. This correlation does not imply a causal relation between ICT use and higher income or productivity, even though a "semi-causal" study using US data shows a significant relation between hourly wages and computer use at work (Krueger 1993). But before getting too excited that this "proves" that computer use "causes" higher productivity, consider that yet another study using German data duplicated Krueger's positive US results for computer use and hourly wages, but also