

Background Paper on Global Citizenship Education

Measurement of Global Citizenship Education

Vegard Skirbekk

Michaela Potančoková

Marcin Stonawski

2013

This paper was commissioned by UNESCO as background information to prepare the Technical Consultation on Global Citizenship Education on 9-10 September 2013 in Seoul, Republic of Korea. The views and opinions expressed in this paper are those of the authors and should not be attributed to UNESCO. The paper can be cited with the following reference: "Paper commissioned by UNESCO for the global citizenship education programme". For further information, please contact: gce@unesco.org

Measurement of Global Citizenship Education

Prof. Vegard Skirbekk

Leader, Age and Cohort Change Group
Wittgenstein Centre (IIASA, VID/ÖAW, WU)
International Institute for Applied Systems Analysis (IIASA)
A-2361 Laxenburg,
Phone: +43 2236 807 378, skirbekk@iiasa.ac.at

Dr. Michaela Potančoková
Research Scholar, Age and Cohort Change Group
Wittgenstein Centre (IIASA, VID/ÖAW, WU)
International Institute for Applied Systems Analysis (IIASA)
A-2361 Laxenburg,
Phone: +43 2236 807 513, potancok@iiasa.ac.at

Dr. Marcin Stonawski
Deputy Leader, Age and Cohort Change Group
Wittgenstein Centre (IIASA, VID/ÖAW, WU)
International Institute for Applied Systems Analysis (IIASA)
A-2361 Laxenburg,
Phone: +43 2236 807 303, stonaw@iiasa.ac.at

Abstract

In this study we provide an overview of Global Citizenship Education, focusing on definitions, methodological advances and data. We present an assessment of some of the existing initiatives for the measurement Global Citizenship Education, and make suggestions for how to move towards a globally consistent measure. Although there is some disagreement over how to measure global citizenship and global citizenship education, we also find consensus on parts of the concept. We are proposing to construct a composite indicator consisting of three complementary levels – the societal level (e.g., the level of democracy; macro level indicators of openness), the supplier level (e.g., provision of education; availability of training relevant for global citizenship); and the receiver level (civic identity, values, skills and knowledge). We conclude that one potential cost-effective approach could be to integrate evidence from several nationally representative surveys, providing us with world-wide coverage. We also discuss the feasibility and benefits of this measurement approach as well as its challenges.

Introduction: *Operational definitions of Global Citizenship Education*

Over the years, many different definitions for Global Citizenship (GC) and Global Citizenship Education (GCE) have emerged. They differ by their normative understanding of the concept, the type of analytical approach used and the data that has been applied. Approaches vary with respect to the purposes of GCE as well as the definition of global competency (Reimers 2013). This has led to several different operationalizations of the concept (Tawil 2013). Some have argued that global citizenship represents a feeling of belonging to the global community or a set of interconnected ideas and beliefs on matters of societal, distributive, political, institutional and environmental importance, referring to a broad, culturally- and environmentally-inclusive worldview. It has been defined with an emphasis on democratic values, peaceful coexistence, human rights, tolerance, responsible citizenship, sustainable development, justice, solidarity and sustainability.

Some have argued that Global Citizenship Education helps prepare humanity for modernity in terms of encouraging the adoption of behaviour and policies conducive to global aims, promulgating a view of the world as one unified system where national interests have the overall needs of the planet in mind (Lewin 2009; Pike 2000). GCE can thus be seen as a means to promote shared values and to provide citizens with competencies for participatory citizenship. A common notion in the GCE literature is that education towards global citizenship should consist of (a) knowledge of existing global trends and shared universal values (peace, human rights, democracy, tolerance, justice, sustainability), (b) promotion of skills needed to exercise ones civic and political rights actively and (c) internalisation of humanistic values and attitudes.

Global citizenship education may focus on advancing core humanistic values such as tolerance towards others and respect for human dignity. It can also include inter-personal and intra-personal skills such as emotional awareness, communication, cooperation, problem-solving and conflict resolution abilities. Human rights centered GCE can include training in critical thinking, empathy, avoidance of stereotyping and exclusion. Civic education can also include learning about local, national and international institutions; good governance; the rule of law; democratic processes; civil society and civic participation. Such an education would inform individuals of their right to avoid violence, the right to life and fair trials as well as freedom of belief, speech and religious affiliation (Buergenthal, Shelton, and Stewart 2009). In a culturally sensitive manner, it could also emphasize family rights, reproductive rights and the global importance of family decisions (Freedman and Isaacs 1993; Burkstrand-Reid, Carbone, and Hendricks 2011; Allotey et al. 2011).

Measurement of Global Citizenship Education

This section gives a short review of some important relevant projects which consider various approaches to measuring GC and GCE.

The Learning Metrics Task Force calls for more focus on the quality of education and collection of better data to measure the learning outcomes of formal education. The latest recommendations emphasize 7 key areas of measurement: 1) access to and completion rates of formal education (% completing primary school), 2) population-based indicators of out-of-school children and dropouts, 3) reading skills (at the completion of primary school), 4) math performance skills (proficiency at a lower secondary level), 5) early learning skills upon entrance to primary school, 6) citizenship values and skills, and 7) exposure across the previous domains (UNESCO and Brookings Institute 2013). The initiative stresses a shift from basic measures of reading and numeracy towards a broader set of competencies to assist individuals with integration into contemporary society and help them succeed in an ever more interconnected and globalized world.

Providing civic and GC formal education can, depending on content, increase one's general ability to understand complex global, ecological, political, social and economic systems. Several studies suggest that nations that have made past investments in schooling and skills tend to subsequently experience greater prosperity (Breton 2011; Yamarik 2011). Over the course of the 20th century, education has become a key determinant of life time success and can increase self-respect, self-autonomy and the ability to conceptualise and carry out ideas in a complex world (Finkel and Smith 2011; Kravdal 2012; Skirbekk 2008). Education is associated with such diverse outcomes as greater tolerance for diversity, more support for democracy and equal rights as well as greater social participation (Norris and Inglehart 2004; Finkel and Smith 2011; Engelhardt et al. 2008; Crespo-Cuaresma 2010). Education has also been found to decrease intolerance towards others, for example towards migrants (Mattes et al. 2013). Furthermore, possessing a higher education leads to greater economic potential and more rational behavior when faced with exogenous challenges such as economic and environmental shocks (Park 2013; Gregorio and Lee 2002). Education also decreases the probability of making incorrect decisions based on "groupthink" processes (Gould 2013; Bénabou 2013).

The International Association for the Evaluation of Educational Achievement (IEA) conducted a survey of 140,000 8th grade students in 38 countries examining whether there is a focus on civics and citizenship education within the school curricula ("IEA:ICCS 2009" 2013). The study concluded that most of the surveyed countries stress participation in civic society,

communication skills and national allegiance in their education. Analysis of the student achievement data led to the establishment of three proficiency levels and quantifiable differences across nations. The civic knowledge scale reflects a range of characteristics and capacities from the most basic and mechanistic elements of civics and citizenship to a more thorough understanding of the wider policy climate and institutional processes that determine the shape of civic communities. The strength of the IEA approach is the use of standardized, relevant, cross-national data. However, one weakness is that it covers a relatively small share of countries of the world and, similarly to the Learning Metrics Task Force, focuses only on younger individuals, not the adult population.

A recent *UNESCO* report reviewed definitions of global citizenship and how these differ across time periods and nations (Tawil 2013). The report examined: how people view the influence of their individual decisions on society as a whole and on societal subgroups; how the influence of other ordinary citizens is assessed; and the assessment of the influence of public organizations and movements. A scale of 10 points, where 1 means “have no influence” and 10 stands for “have a great influence”, was applied in respect to all three indicators. The report also discusses the shift from more “conservative” towards more “progressive” education practices, e.g., from “civic education” to “citizenship education”, from education “about citizenship” to “for citizenship”, and from a general understanding and knowledge-based approach towards the one based on the ability to change and to adapt to change.

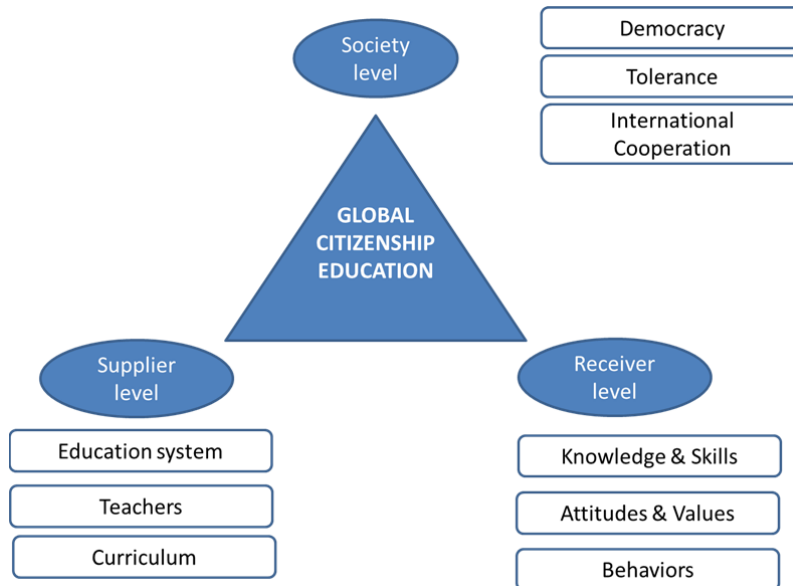
A potential limitation with several of the existing approaches we have overviewed is the lack of a unified measure of GC and GCE. Further, surveys often have low worldwide coverage and adult populations are often not sufficiently tested in spite of the emphasis on life-long learning by education specialists (UNESCO 2013). To overcome these shortcomings, we propose a different approach based on exploring and exploiting existing data from general purpose surveys and data collected by institutions such as UNESCO (UIS, IBE). We will then triangulate between different data sources to assess levels of GCE. We also find that there is a need for longitudinal analysis of global citizenship and sequential cohort-analyses that would help to identify age and cohort changes.

Towards a global and comprehensive measure of Global Citizenship Education

Identifying broadly supported and harmonized concepts of GCE is a precondition for measuring it. An acceptable theoretical base would therefore allow identifying levels, time trends and geographic variation of GCE. Furthermore, there would be the possibility for a more detailed analysis on the conditions and prerequisites for higher levels of GC (e.g., for types of policies and educational solutions that would stimulate changes in values and behaviors).

Global citizenship values are transferred between individuals through education in different forms: formal, informal and non-formal. In order to measure GCE, it is important to focus on the system of education that an individual is involved in as well as the effects of education that are achieved by participating in this system. Individual values, attitudes and behaviors are influenced by society. Individuals function and act within a broader institutional environment that provides them with opportunities and restrictions that can influence their worldviews, value systems and GC development. Societal attributes such as the system of government, openness to other countries and general societal tolerance can stimulate or retard the development of GC among individuals. Society designs its own educational system in accordance with societal priorities (e.g., formal education includes a specific curriculum and teachers have certain characteristics). The education system, in turn, can be a driver of change in society as a means of introducing new knowledge, skills, values and attitudes. As the system must respond to the needs of individuals, it is thereby influenced by individuals. In order to measure this complex and interrelated dynamic from the perspective of GCE, there is a need for a framework that would capture all crucial elements: the society, the education system that fosters GCE and the individual. Therefore, we propose to distinguish three levels for measurement of GCE: a *supplier level* that focuses on dimensions of the educational system, a *receiver level* that evaluates the effects of education on a population, and a *societal level* that indicates broader institutional and socio-economic context (see Fig 1).

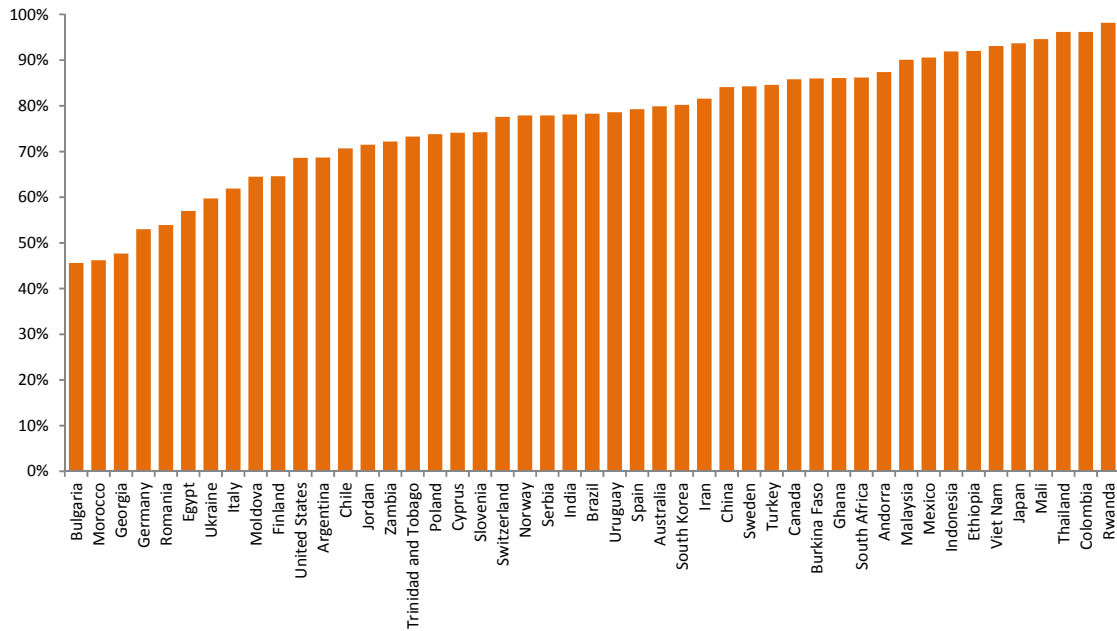
Figure 1: Areas specifying the components of the composite indicator for the measurement of the Global Citizenship Education



A meaningful measurement of GCE should include as many relevant dimensions of the supplier, receiver and societal level as possible. To gather empirical knowledge on the dimensions, there are two possible options: (a) collect new data on the specified factors in collaboration with organizations that can organize global data collection (e.g., the Pew Research Center or Gallup Inc.), or alternatively (b) analyse existing surveys and registers, including education statistics of UNESCO, which contain information on the variables of interest. Existing datasets do not currently provide sufficient information and some data such as information on the GCE curricula will have to be collected in the future. Our approach includes data collection on both the individual level (micro) as well as the aggregate level (macro).

Micro data are needed for understanding values, attitudes and behaviors of individuals in terms of GC (*receiver level*). These are usually collected in surveys and opinion polls. A simple subjective self-assessment, such as: “Do you see yourself as (Nationality only), (Nationality and a Global Citizen), a (Global Citizen and Nationality) or only a (Global Citizen)” is one example of a possible question. Figure 2 provides an example, showing the share that see themselves as world citizens across nations.

Figure 2: Proportion of people that strongly agree or agree with a statement
 “I see myself as a world citizen”. (Source: WVS data)



Macro data such as synthetic measurements of democracy, tolerance, and quality of education are used to summarize information on education systems (*supplier level*) and institutional and socio-economic dimensions (*society level*). Such data are already collected by national and international institutions (e.g. UNESCO, World Bank, OECD, Brookings Inc.)

To measure GCE globally and in comparative manner, we propose to develop a composite index. The main elements should be easy to operationalize, use and interpret. To monitor the progress and trends in Global Citizenship Education, it is necessary to measure factors that affect development along several dimensions.

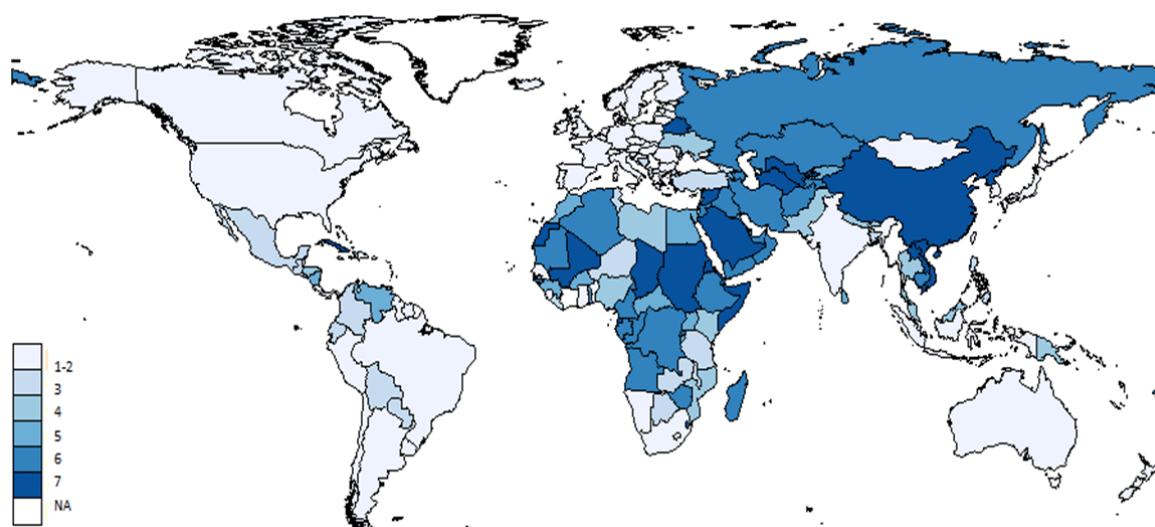
In the following paragraphs we discuss elements within each level, propose variables for the measurement of each element and briefly describe what the variables for the composite index measure. The choice of appropriate indicators should be based on recommendations of experts in corresponding fields of research. The proposed indicators below are only examples of possible measurements of GCE levels.

Societal level

At the societal level we intend to assess three main components important in the context of the GCE: level of *democracy* in the country, *tolerance* towards others (religious groups, ethnic minorities etc.) and *international cooperation* to assess openness of the country.

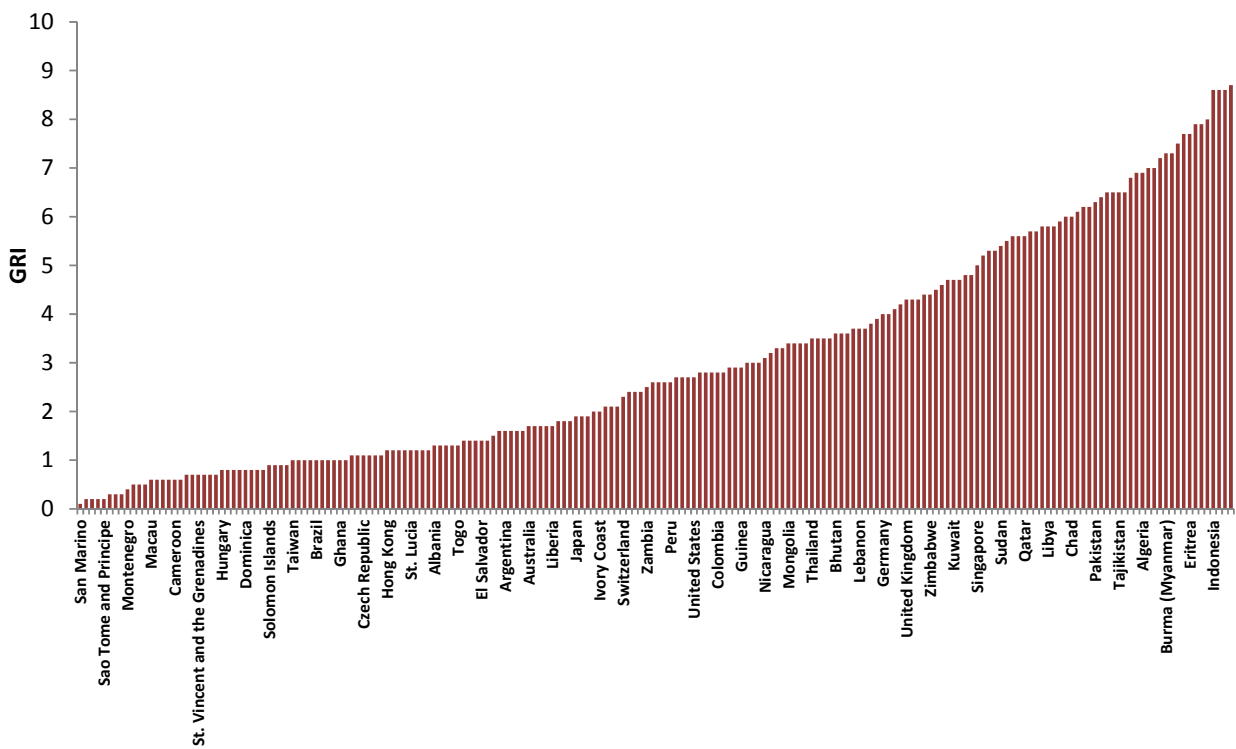
Quality of *democracy* is crucial as nations that do not have a functioning democratic system are less likely to respect human rights, political rights and support civic participation central to GCE. One example showing cross-national variation in political rights is provided in Figure 3. Some regimes may be reluctant to include human rights and other controversial topics into curricula on GCE and, therefore, information on the type of government can help in assessing the scope of GCE provision. In this regard, the issue of gender equality is particularly controversial within certain cultural contexts. To assess the level of democracy, we would use a factor based on the existing measurements of democracy, freedom of speech and so forth. The range of possible indicators is broad, and some of them are listed in Appendix Table 1. We can use, for example, the Freedom House Index (evaluates the level of political and civil liberties citizens can enjoy), the World Press Freedom Index and the Corruption Perception Index. Global results from the Political Rights Index constructed by Freedom House are shown in Figure 3. Alternatively, an indicator of the level of democracy can be developed in collaboration with the Varieties of Democracy project.

Figure 3: Political rights index 2013 (Source: Freedom House)



Tolerance and respect are values central to GCE. A lack of respect for minorities as well as ethnic or religious conflict can affect regulations, norms and cooperation that underlie the development of GC. There are differences between the individual level and general level of intolerance. This component can be approximated using indices on social hostilities or restrictions towards minority groups (see Table 1). Examples of such indices are the Social Hostilities Index (measures of hostilities towards religious groups) and Government Restrictions Index (measures of limits imposed by governments on religious beliefs and practices) elaborated by Pew Research Center, and data on the risk of armed conflicts collected by Uppsala University. Figure 4 shows international variation in the government restrictions index.

Figure 4: Government Restrictions Index, 2010
 (Source: Pew Research Religion & Public Life Project)



Greater levels of collaboration and economic openness can also affect citizen GCE levels. In countries with limited international economic and social exchange, weak economic ties with citizens in foreign countries may lead to fewer opportunities and incentives to learn about global issues. To construct such an index, we can use aggregate indicators developed by international organizations such as the World Bank and OECD, for example the Indicator of Trade Openness.

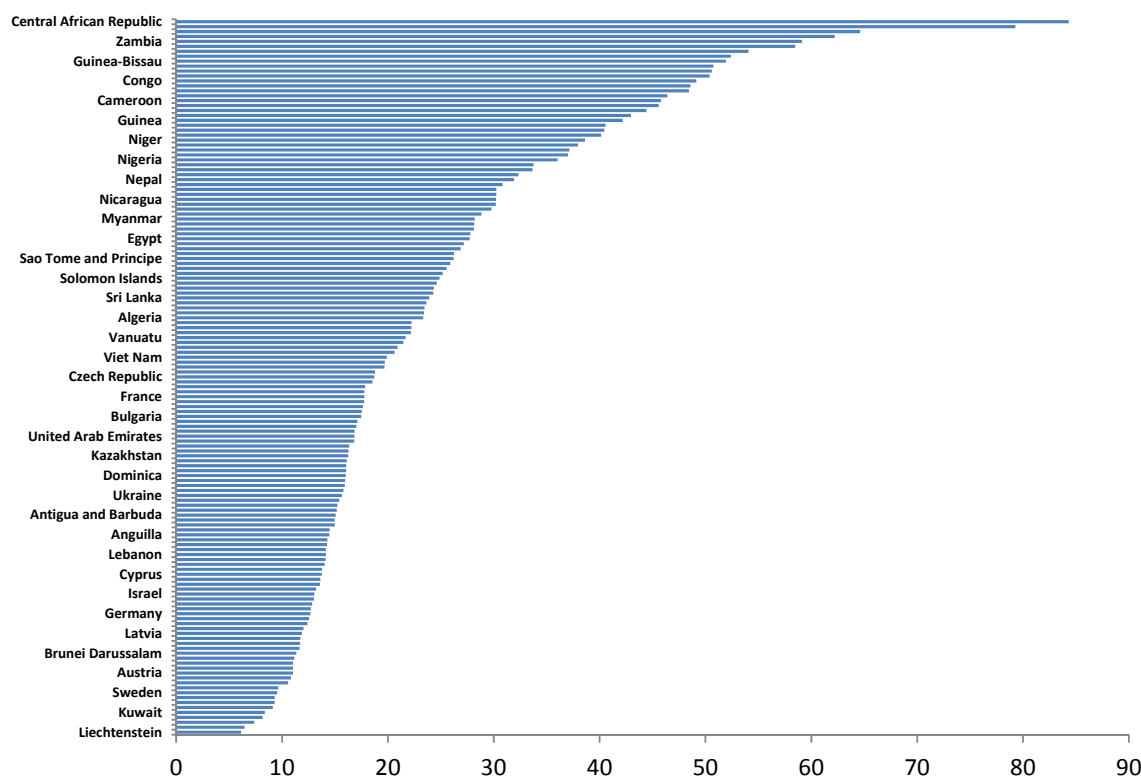
Supplier level

The *supplier level* refers to the provision of GCE, both within the formal education system as well as through informal and non-formal education. Because of a lack of available data on the latter two, we will focus on measurements of formal education. However, we emphasize that all channels are very important in transmitting GC. Within the supplier level we look at: (a) the characteristics of the educational system that fosters GCE, (b) teacher characteristics and (c) content of GCE (curriculums). All three dimensions jointly determine the scope, capacity, quality and content of GCE provided via the formal education system. Characteristics of the education system must be included because access to education determines how many people are exposed to GCE at different stages of the educational process (enrollment rates, out of school children) and qualities of the learning environment (classroom size, pupil/textbook ratio). The capacity of the education system to provide GCE is determined by the quantity and quality of teachers. Qualified, open-minded teachers with internalized GC values can provide better GCE. Therefore, indicators such as teachers' qualifications (for example percentage of teachers with tertiary level diploma, proportion of full-time teachers) as well as values and attitudes of teachers are highly relevant. Whether GCE is provided and what GCE themes are covered (curriculum on civic education, international geography, ecology and sustainable development, intercultural education etc.) can be assessed by collecting information on curriculums. Moreover, we can look at whether the educational system creates opportunities for intercultural exchange (participation in international exchange programs, presence of foreign students or teachers). An educational system that includes GCE will graduate individuals with internalized democratic values that are aware of global challenges and possess the capacity to live and act within a global context.

GCE is embedded within the existing *education system* of a country and therefore we need to measure its characteristics and limitations. For example, the proportion of out-of-school children and enrollment rates at different education levels directly affect the proportion of cohorts that can receive GCE. Further, life-long education with relevance to GCE could be an important part of the education system, particularly in ageing countries. Teaching conditions such as a smaller classroom size and the provision of textbooks are highly influential in determining educational outcomes. While some general characteristics indirectly indicate the quality of education provided (e.g., classroom size, pupil/textbook ratio) and are easily available from the data collected by UIS, other more specific indicators such as the percentage of students studying abroad or percentage of foreign students are not readily available.

The number and quality of *teachers* is linked to the capacity of the system to provide GCE. This can affect educational coverage and the ability to provide a quality education to students. The quality of teachers in terms of their training (percentage of trained teachers, percentage of teachers with tertiary diploma) and employment (number of fulltime vs. part-time teachers, teacher attrition rate) has a direct impact on the receivers. Besides readily available data, information on the proportion of teachers that studied abroad and participate in international teacher-exchange programs can be of relevance to the GCE. Figure 5 presents findings on the teacher-pupil ratio at the primary level. However, many other relevant data are not readily available and would need to be collected.

Figure 5: Teacher-pupil ratio at primary level, 2010 (Source: UIS)



Besides professional competencies and knowledge, attitudes and values of teachers can affect the quality of GCE provision. It would be worthwhile to investigate them by identifying teacher subsamples in available surveys (e.g. ISSP, WVS).

GCE can be taught in many different ways and the content can vary across countries depending on the country-specific needs. Within this component we will look at the existence of *curriculums* on GCE and GCE related topics in the country of interest and also coverage of GCE topics in existing curricula. Civic or citizenship education, peace education, education

towards intercultural understanding and other programs already exist and partially cover topics of GCE, yet information on the global dispersion of such programs is not readily available. Information on curricula can either be collected by UNESCO or alternatively through an expert survey.

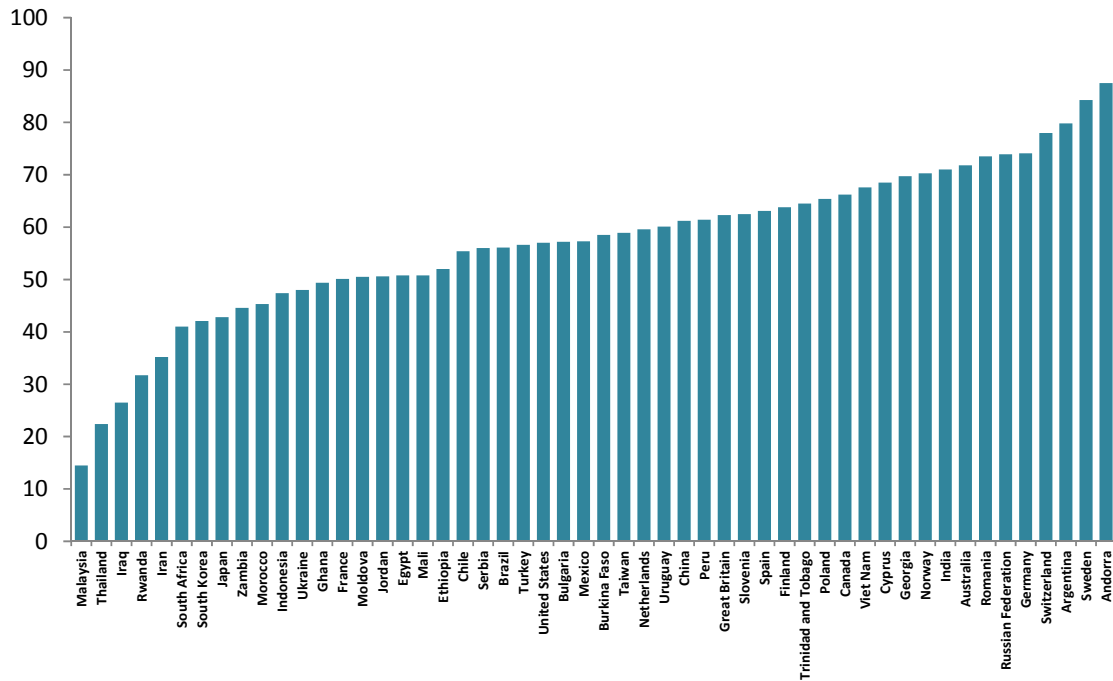
As mentioned above, we focus on formal education. Although non-formal and informal education can be very influential on the mindset and worldview of an individual, it is extremely difficult to measure. The existence of the non-formal education and adult education on GCE can be possibly captured by factoring in the information on the number of NGOs active in the GC and GCE in a country. However, an expert survey would be needed to assess such information. All formal, non-formal and informal education shape the individual; the outcome of all these influences is inseparable and will be measured at the receiver level.

Receiver level

At the receiver level we measure the outcomes of learning in GCE. To assess this, it is necessary to measure the following characteristics of individuals: (a) *identity*, i.e. whether the person considers him/herself as a global citizen; (b) *values and attitudes* corresponding to the areas of the GCE (sustainable development, democratic values and human rights) as well as (c) *knowledge and skills* that would help transform individual values into actions, and (d) *behaviour* to carry out these actions. We would include measures corresponding to the three broad domains: knowledge and skills, values and attitudes, and behaviors corresponding to the following elements of GCE - tolerance towards others, democratic values including equality, acceptance of universal human rights, anti-fatalistic attitudes, attitudes towards sustainable development and social cohesion.

We have reviewed existing general purpose surveys and identified several questions that measure some of these elements. Examples are shown in the Appendix Table 1. Some of the richest datasets include information on variation in values and attitudes. Figure 6 demonstrates the variation across countries using an example of the question on acceptance of equal rights of women, which is an essential democratic value. Further and more systematic review of additional surveys can lead to more comprehensive coverage.

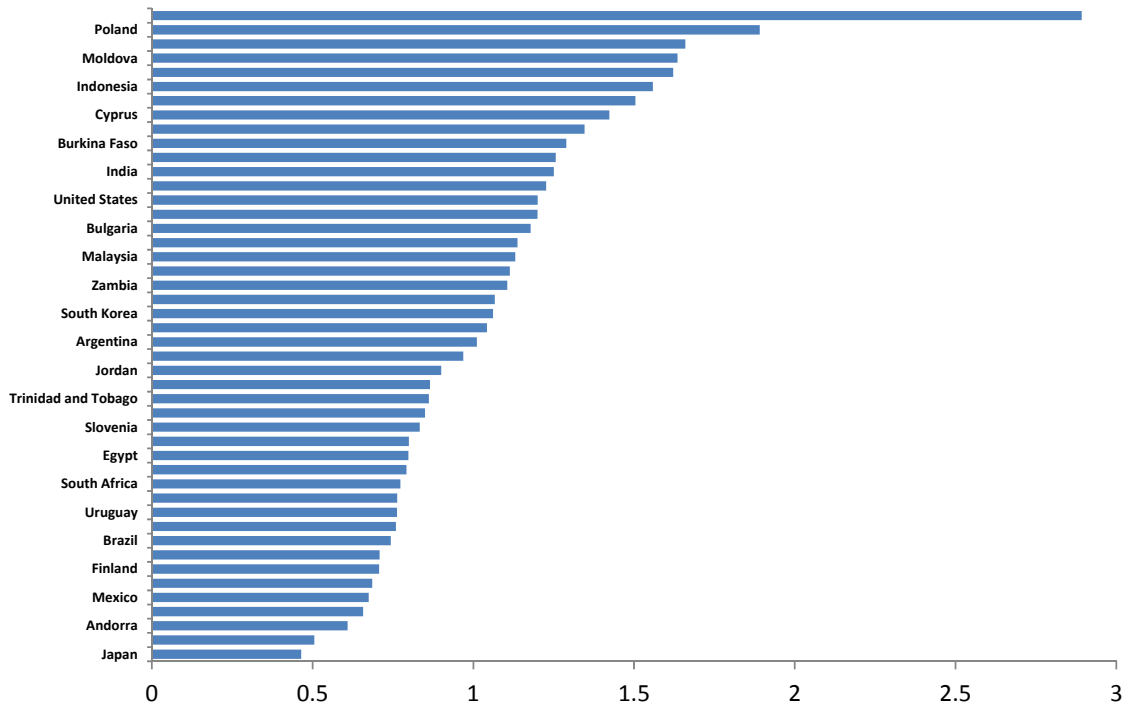
Figure 6: Proportion of people who agree that essential characteristic of democracy is that women should have the same rights as men (Source: World Value Survey 2005-2008)



General purpose surveys also include questions measuring tolerance, values and attitudes; however, such surveys tend to not include questions on knowledge and skills with respect to GCE. One of the limited examples is World Values Survey that inquired into the awareness of the Millennium Development Goals (MDGs).

Results also differ strongly when we compare younger individuals to older ones (see Figure 7) and incorporating the ratio between the young and old into the proposed index can be important because this indicates the development of GC along cohort lines.

Figure 7: Proportion who heard about the MDG among 15-29 to proportion who did it among 50+ (Source: World Value Survey 2005-2008)



Incorporating indicators of learning metrics or student outcomes is one possible way to fill in the gaps in the measurement of *knowledge and skills*. Other questions, for example on *behaviours*, would have to be included by developing batteries of questions to be added to the existing surveys. Regardless of subjectively expressed identity, only individuals that understand and interpret local problems within a global context and with respect to global implications can be considered global citizens.

Recommendations

A broadly agreed operational definition of GCE that would specify the core competencies is essential for developing a meaningful measure. We have argued that the measurement should not be limited to an assessment of the learning outcomes of the receivers of GCE, but it should take into account the context of GCE provision. Thus, we propose an indicator consisting of three levels – societal, supplier and receiver. At the receiver level we would measure the outcome - knowledge, skills, values, attitudes and behaviours of the receivers of GCE. The two additional levels would measure the properties of the educational system that fosters GCE and the societal level within which both the educators and receivers are embedded.

To measure GCE globally and in a comparative manner, we propose to develop a composite index. Sub-indexes of the index would correspond to the three levels. The main elements should be easy to operationalize, use and interpret. It will be simple enough to compute the index for almost all countries worldwide to allow for a global assessment of GCE. The indicator should be suited for cross-country comparisons as well as for monitoring of GCE trends and progress over time. Furthermore, it should not be limited to children in schools but also include adult population – especially if GCE is considered one of the areas of life-long learning.

The information needed to measure all dimensions of GCE should be collected at regular intervals using nationally representative surveys. This can be best done only in collaboration with international and national institutions. Successful monitoring depends on analyzing the specific areas of the sub-indices of the proposed GCE index. Additional expert surveys could improve data availability on the provision on global citizenship values and curricula, which is not collected globally and in a comprehensive manner. In particular, indicators used to measure aggregate characteristics at the societal level and the components of the supplier level will rely heavily on such collaboration. At the moment, data tends to be scattered and neither gathered in one database nor analysed for the purpose of studying GCE.

Measuring outcomes through learning metrics of citizenship education is essential to assess knowledge and skills of students. As described in the previous sections, it is equally important to evaluate the same skills of the general population including adults. However, existing data on learning tend to be limited to the population of children in schools. Thus, it is crucial to develop batteries of questions measuring values, attitudes and behaviours, and identify questions that are already included in the existing surveys that would apply to the country-specific contexts and will enable us to provide comparative information on GC and GCE. This can be done in collaboration with the existing global surveys, such as those carried out by Gallup, PEW, World Value Surveys, Demographic and Health Surveys and regional “barometers” (e.g. Eurobarometer, Afrobarometer, Latinobarometer). The developed modules could be integrated into the surveys that collect nationally representative data repeatedly at intervals needed to measure the progress in GCE. Not all countries participate in global surveys such as WVS or ISSP; therefore, collaboration with organizations such as PEW or Gallup, can be vital for the data collection on a global scale.

Another possible approach would be to try to collect existing data from nationally representative surveys, identify relevant variables and use expert opinions to weight the different variables. This method could include variables on tolerance, acceptance of the beliefs of others and their right to change, “global-mindedness” in terms of culture, tolerance

of freedom of speech, etc. It could also include data from actual behavior, including consumer expenditure surveys, demographic behavioral data, etc.

Attachment

Table 1. Measurement of Global Citizenship Education

Dimension	Components/parameters to measure	Examples of measures:	Data collection options
Societal	Democracy	<ul style="list-style-type: none"> • <i>Freedom House index of political rights</i> Two main components: Political Rights (Electoral Process; Political Pluralism and Participation; Functioning of Government); Civil Liberties (Freedom of Expression and Belief; Associational and Organizational Rights; Rule of Law; Personal Autonomy and Individual Rights) • <i>Quality of Democracy indicator</i> Two dimensions: Quality of Politics (freedom and other characteristics of political system); Quality of Society (performance of the non-political dimensions) • <i>World Press Freedom Index</i> • <i>Corruption Perceptions index</i> (Transparency International) 	Aggregated level data from international and national organizations (Freedom House, World Press, Transparency International and/or others)
	Tolerance	<ul style="list-style-type: none"> • <i>Social Hostilities Index</i> Includes questions such as “Was there mob violence related to religion?” and “Was there a religion-related war or armed conflict in the country? (Pew Centre); • <i>Government Religious Restrictions Index</i> Measures limits imposed by governments on religious beliefs and practices; based on 20 questions to assess state curbs on religion at the national, provincial and local levels. E.g., “Is public preaching by religious groups limited by any level of government?,” and “Taken together, how do the constitution/basic law and other national laws and policies affect religious freedom?” (Pew Centre) 	Aggregated level data from Pew Centre, Uppsala University
	International cooperation and openness	<ul style="list-style-type: none"> • Indicator of trade openness (OECD’s trade-to-GDP) • International level of exchange in capital flows, goods, services • Foreign aid 	Aggregated level data from international and

			national organizations (World Bank, OECD)
Supplier	Education system	<ul style="list-style-type: none"> • Enrollment rates • % of children in employment (ages 7-14) (World Bank) • % students studying abroad* • % students going participating in international exchange programs during studies* • % foreign students and teachers* • Classroom size • Pupil/textbook ratio 	Aggregated level data from international and national organizations (UNESCO – UIS, IBE, World Bank)
	Teacher characteristics	<ul style="list-style-type: none"> • Average number of pupils per teacher • % of trained teachers • % of full-time teachers • Teacher attrition rate • % teachers with tertiary level diploma • % teachers studied abroad* 	Aggregated level data from international and national organizations (UNESCO)
		<ul style="list-style-type: none"> • Subsample of surveys on teachers’ attitudes, values and behavior 	Individual level data – general purpose survey or designed survey with collaboration with Pew or Gallup
	Curriculum	<ul style="list-style-type: none"> • Presence of curriculum on intercultural communication, civic education, international geography, ecology and sustainable development * • Average number of foreign languages available for student at different levels of education * 	Aggregated level data from international and national organizations (UNESCO - IBE)

Receiver	Knowledge and skills	<ul style="list-style-type: none"> • Knowledge about global challenges and problems <ul style="list-style-type: none"> ○ Have you heard of the Millennium Development Goals? ○ To which extent does global environmental challenges require that you change your own behaviour? • Knowledge of languages* • Use of internet and modern ways of communications <ul style="list-style-type: none"> ○ Can you use a personal computer? ○ How often, if ever, do you use a personal computer? 	Individual level data – general purpose survey or designed survey with collaboration with Pew or Gallup
	Attitudes and values	<ul style="list-style-type: none"> • Global identity and openness <ul style="list-style-type: none"> ○ Level of agreement with a statement “I see myself as a world citizen” ○ Level of agreement with a statement “A benefit of the Internet is that it makes information available to more and more people worldwide” • Willingness to help others <ul style="list-style-type: none"> ○ Would you be willing to pay higher taxes in order to increase your country’s foreign aid to poor countries? • Acceptance of universal human rights, equality <ul style="list-style-type: none"> ○ Justifiable - For a man to beat his wife ○ Justifiable - homosexuality ○ Women have the same rights as men is an essential characteristic of democracy • Sustainable development <ul style="list-style-type: none"> ○ Level of agreement on an increase in taxes if the extra money were used to prevent environmental pollution ○ For certain problems, like environment pollution, international bodies should have the right to enforce solutions • Anti-fatalistic attitudes <ul style="list-style-type: none"> ○ Agreement with statement “people can do little to change life” 	Individual level data – general purpose survey or designed survey with collaboration with Pew or Gallup
	Behaviors	<ul style="list-style-type: none"> • Involvement in civic activities <ul style="list-style-type: none"> ○ Did you vote in your country’s recent elections to the national parliament? ○ Are you an active member of a NGO? 	Individual level data – general purpose survey or designed survey with

		<ul style="list-style-type: none">• <i>Pro-environmental behaviors</i><ul style="list-style-type: none">○ Choose products for environmental reasons, even if they cost a bit more?○ How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling?	collaboration with Pew or Gallup
--	--	--	----------------------------------

* data are not readily at hand and will have to be collected

References

- Allotey, Pascale A, Simone Diniz, Jocelyn DeJong, Thérèse Delvaux, Sofia Gruskin, and Sharon Fonn. 2011. "Sexual and Reproductive Health and Rights in Public Health Education." *Reproductive Health Matters* 19 (38) (November): 56–68. doi:10.1016/S0968-8080(11)38577-1.
- Bénabou, Roland. 2013. "Groupthink: Collective Delusions in Organizations and Markets." *The Review of Economic Studies* 80 (2) (January 4): 429–462. doi:10.1093/restud/rds030.
- Breton, Theodore R. 2011. "The Quality Vs. the Quantity of Schooling: What Drives Economic Growth?" *Economics of Education Review* 30 (4) (August): 765–773. doi:10.1016/j.econedurev.2011.01.005.
- Buergenthal, Thomas, Dinah Shelton, and David Stewart. 2009. "International Human Rights in a Nutshell." *GW Law Faculty Publications & Other Works* (January 1). http://scholarship.law.gwu.edu/faculty_publications/327.
- Burkstrand-Reid, Beth, June Carbone, and Jennifer S. Hendricks. 2011. "Teaching Controversial Topics." *Family Court Review* 49 (4): 678–684. doi:10.1111/j.1744-1617.2011.01404.x.
- Crespo-Cuaresma, Jesús. 2010. "Natural Disasters and Human Capital Accumulation." *The World Bank Economic Review* 24 (2) (July 9): 280–302. doi:10.1093/wber/lhq008.
- Engelhardt, H., I. Buber, V. Skirbekk, and A. Prskawetz. 2008. "Social Engagement, Behavioural Risks and Cognitive Functioning Among the Aged". Vienna, Austria: Vienna Institute of Demography of the Austrian Academy of Sciences.
- Finkel, Steven E., and Amy Erica Smith. 2011. "Civic Education, Political Discussion, and the Social Transmission of Democratic Knowledge and Values in a New Democracy: Kenya 2002." *American Journal of Political Science* 55 (2): 417–435. doi:10.1111/j.1540-5907.2010.00493.x.
- Freedman, Lynn P., and Stephen L. Isaacs. 1993. "Human Rights and Reproductive Choice." *Studies in Family Planning* 24 (1) (January 1): 18–30. doi:10.2307/2939211.
- Gould, Robert. 2013. "The Transformative Power of Engaged Thinking for Peace Education." In *Critical Peace Education*, edited by Peter Pericles Trifonas and Bryan Wright, 59–68. Springer Netherlands. http://link.springer.com/chapter/10.1007/978-90-481-3945-3_4.
- Gregorio, José De, and Jong–Wha Lee. 2002. "Education and Income Inequality: New Evidence From Cross-Country Data." *Review of Income and Wealth* 48 (3): 395–416. doi:10.1111/1475-4991.00060.
- "IEA: ICCS 2009." 2013. Accessed July 6. http://www.iea.nl/iccs_2009.html.
- Kravdal, Øystein. 2012. "Further Evidence of Community Education Effects on Fertility in sub-Saharan Africa." *Demographic Research* 27: 645–680. doi:DOI: 10.4054/DemRes.2012.27.22.
- Lewin, Ross. 2009. *The Handbook of Practice and Research in Study Abroad: Higher Education and the Quest for Global Citizenship*. Routledge.
- Mattes, Robert, D.M. Taylor, David A. McDonald, Abigail Poore, and Wayne Richmond. 2013. "Still Waiting for the Barbarians: South African Attitudes to Immigrants & Immigration." Accessed May 6. http://web.uct.ac.za/depts/politics/pol_people/Mattes/Mattes%20SAMP%2014.pdf.
- Norris, Pippa, and Ronald Inglehart. 2004. *Sacred and Secular: Religion and Politics Worldwide*. Cambridge: Cambridge University Press.
- Park, Kang H. 2013. "Effects of Education and Globalisation on Income Distribution." *International Journal of Business and Globalisation* 10 (2) (January 1): 220–232. doi:10.1504/IJBG.2013.052256.
- Pike, Graham. 2000. "Global Education and National Identity: In Pursuit of Meaning." *Theory Into Practice* 39 (2): 64–73. doi:10.1207/s15430421tip3902_2.
- Reimers, Fernando. 2013. "Education for Improvement: Citizenship in the Global Public Sphere." *Harvard International Review* 35 (1).
- Skirbekk, Vegard. 2008. "Fertility Trends by Social Status." *Demographic Research* 18 (5) (March 28): 145–180. doi:10.4054/DemRes.2008.18.5.
- Tawil, S. 2013. *Global Citizenship Education - Moving Beyond the Metaphor*. June. ERF Occasional Papers UNESCO Education Research and Foresight 8.
- UNESCO, and Brookings Institute. 2013. "Toward Universal Learning: Recommendations from the Learning Metrics Task Force | Brookings Institution." <http://www.brookings.edu/research/reports/2013/09/learning-metrics-task-force-universal-learning>.
- Yamarik, Steven. 2011. "Human Capital and State-level Economic Growth: What Is the Contribution of Schooling?" *The Annals of Regional Science* 47 (1) (August 1): 195–211. doi:10.1007/s00168-010-0365-9.