

BMZ



Federal Ministry
for Economic Cooperation
and Development



Argumentation Framework

The Effects of Education on Development

Published by

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

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I bear full responsibility for the contents of this study. The opinions and views expressed in the study do not therefore necessarily reflect those of the publisher.

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List of abbreviations

ADEA	Association for the Development of Education in Africa	MDGs	Millennium Development Goals
BMZ	German Federal Ministry for Economic Cooperation and Development	NGOs	Non-governmental organisations
CARICOM	Caribbean Community	OECD	Organisation for Economic Co-operation and Development
DCS	Developing Countries	ÖFSE	Austrian Research Foundation for International Development
DC	Development Cooperation	PISA	Programme for International Student Assessment
ECD	Early Childhood Development	RECOUP	Research Consortium on Educational Outcomes and Poverty
EFA	Education for All	TIMSS	Trends in International Mathematics and Science Study
GAD	Gender and Development	TVET	Technical and Vocational Education and Training
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	UNDP	United Nations Development Programme
GPE	Global Partnership for Education	UNESCO	United Nations Educational, Scientific and Cultural Organization
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit	UNGEI	United Nations Girls' Education Initiative
HDI	Human Development Index	UNICEF	United Nations Children's Fund
HFLE	Health and Family Life Education	WID	Women in Development
IALS	International Adult Literacy Survey	WVS	World Values Survey
IEA	International Association for the Evaluation of Educational Achievement		
LIC	Low-income country		

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Summary

The aim of this argumentation framework is to analyse the current academic debate regarding the effects of education on areas of society that are relevant to development policy and to derive key findings for development cooperation (DC). A total of 43 publications were considered for this purpose, of which there were 16 quantitative, five qualitative and three mixed quantitative-qualitative empirical studies. A further 16 literature reviews and three synthesis reports were also included in the analysis. The body of academic literature relating to the economic and health sector is vast. There is also sufficient literature available covering the effect of education on gender relations, the development of democracy and conflict prevention to derive valid findings. This does not apply to the relationship between education and culture, the environment, nutrition, corruption and inclusion. No meaningful evidence was determined for these areas.

The quantitative analysis of the literature studied reveals differences with regard to the issue of whether the effect of education is either direct and non-context bound, or whether it is context-bound. Twenty studies note that the effect education has is irrespective of any particular context. Fourteen identify a dependency on context, while seven studies reach different results (e.g. that the effects over time are different to what is expected); in two studies, education was found to make no impact on the social field investigated.

In cases where the effects of education are context-bound, the following key factors are described in the literature studied: the quality of education, the institutional and macroeconomic environment, social inequality and inequality in the education system as well as social and cultural norms, particularly with regard to gender relations. These contextual factors provide a key basis on which to enhance the effectiveness of education support. Measures in the area of

early childhood development and cross-sector interventions also play an important role in increasing effectiveness.

The result reached from analysing the literature is that education has direct positive effects on individual income levels, on reducing the fertility rate, on the health of participants in education and their offspring, on the learning performance of the children of such participants as well as on a number of aspects relating to the development of democracy. Under certain conditions, education may also produce very favourable effects on economic growth, poverty reduction, empowerment and participation as well as on the prevention and resolution of conflicts. One particular finding that is relevant to development cooperation is the inversion of rates of return to investments in education. Whereas these had been highest for the primary school sector since the 1960s, today the highest returns are found in the tertiary education sector. As a result, the poverty-reducing effect of only attending primary school tends to be called into question, revealing the need for a stronger education system as a whole.

The argumentation framework recommends drawing on plurimethodological and interdisciplinary research when making policy decisions. Research is required into the specific effects over time in those sectors mentioned above for which no valid findings were derived, and for several areas of education, most notably vocational education. Recommendations for development cooperation also include designing programmes to be context-oriented and to cover a number of sectors, applying complex gender approaches, ensuring educational quality, promoting inclusive and holistic education systems (including early childhood development and vocational education) as well as a stable institutional environment.

1 Introduction

Education is a human right. The aim of ensuring universal access to education is therefore a fundamental task of national and international (development) policy. Education also plays a key role in the development process (see, for example, Sen 1999). It is regarded as a key cornerstone in poverty reduction as well as an essential instrument not only for improving health, achieving gender equality, strengthening human rights and democratic participation, but also in terms of peacebuilding.

Given the far-reaching effects of education, in 2009 Germany's Federal Ministry for Economic Cooperation and Development (BMZ) declared this a key area of German development policy (BMZ 2012a). At its heart is the need to strengthen those effects of education which are relevant in terms of development.

This study was created as part of the sector-specific BMZ annual theme for 2012 entitled 'Education with impact' (BMZ 2012b), the aim of which is to analyse the current academic debate regarding the effects of education on sectors and areas of society that are relevant to development policy and to derive key findings for German and international development cooperation (DC). The resulting argumentation framework is designed to help policy-makers weigh up the advantages and disadvantages of investing in education support as well as its structure.

Education impacts strongly both on individual and social development processes, a fact on which the academic debate is generally agreed. At the same time, the question as to what kind of an effect education can have has long been the subject of academic studies with the findings being as varied as they are controversial. In this argumentation framework, a conscious effort has therefore been made to highlight the range of academic viewpoints and to draw valid findings herefrom. Ultimately, the results confirm the significant effect of education in development terms, but also point to the fact that – in several areas at least – certain requirements need to be in place in order for this effect to be felt.

This argumentation framework begins by making conceptual reflections on the relationship between the terms development, effect and education. It then describes the range of literature and the criteria for selecting literature and briefly addresses methodological restrictions. The findings are then quantitatively analysed, summarised and discussed. The study concludes by making recommendations.

A matrix of the literature studied can be found in the annex.

2 Conceptual reflections regarding the effect of education on development

The question about if and how education impacts development is not a new one. The first time this issue was raised, it was not done so in connection with development cooperation. Instead, it is above all the important role of universal schooling in the emergence of national states (Heynemann 2002/3) and for the transition from feudal to industrial societies in Europe which has led to the assumption that education could take on a similar significance for developing countries.

Within the context of DC, there have been various different phases and models of education support. However, it has had a consistently high importance which is currently reflected in international framework agreements on education, most notably in the Education for All initiative (EFA) (UNESCO 2000), but also in the second and third Millennium Development Goals (United Nations General Assembly 2000). In this respect, repeatedly raising the issue of the effects of education on development and developing this issue further on the basis of new development challenges and objectives is justifiable.

The complexity of development already becomes apparent at this stage. Whereas the definition of the term has for many years been the subject of academic and political controversy, in international discourse an understanding of development has been established which is now more comprehensive than the previous focus on economic growth and includes education, health, gender equality, democracy and stability, as well as security, environmental sustainability and economic factors.

This understanding began to be applied with the publication of the UNDP Human Development Report 1990, the conceptual foundation of which is provided by the work of Amartya Sen and his focus on people's choices and agencies (Sen 1989 and Sen 1981). This resulted in a rejection of the confinement to neoclassical concepts of economic development and an expansion of the focus to cover the phenomena of inequality, undersupply and participation (UNDP / United Nations Association of Germany 2010, 14). Today, the

concept of human development is defined via three components: well-being, participation in political life and justice with a strong reference to environmental sustainability as a general framework (ibid. 30).

The notion of human development has now become the conceptual basis for international and many national development policies. Nevertheless, it is more realistic to see this as a normative framework which, at best, serves as a political objective for real development processes which are in turn subject to historically shaped asymmetries and both global and local balances of power. For the purposes of this study, a normative understanding of development therefore seems the most sensible. Here, development is understood as those social, economic, political and cultural change processes which move in the direction of the model of human development outlined above. In this respect, DC is seen as providing support for these processes.

What significance does education therefore have in these processes? The question which is asked repeatedly regarding the effect of education must also be viewed against the background of the effectiveness debate which has become the focus of international discourse on development ever since the Paris Declaration on Aid Effectiveness (OECD 2005).

For this argumentation framework, the level of practice at the centre of the DC debate is less important than that of the analysis of effects and the drawing of causal relationships with regard to development, in those cases where this is possible. The basic assumption here is that certain processes, events or interventions bring about particular changes. From a methodological standpoint, the question arises here as to the relationship between correlations and causalities. Academic debate produces a wide range of answers to this question, as is reflected in the present literature review. Since very diverse social processes are taken into account in connection with development and education, the argumentation framework is based on a multidimensional understanding of effect mechanisms and, accordingly, a cautious approach to

correlations and causalities. The triggering processes and measures as well as the changes that these bring about must be understood as complex phenomena which reveal the relational nature of the social conditions.

Such a complex understanding is reflected in the results model of BMZ which applies to all of Germany's bilateral DC. This model describes a series of successive causal relationships within a development measure which lead to the attainment of objectives (BMZ 2006). In carrying out programme measures, account is taken of the fact causal relationships are influenced by a range of other interacting factors, levels, actors and relationships. This understanding is put into practice in the new results model of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, which is based on a systemic results structure instead of the previous linear results chain¹. The results model maps the entire change process in a sector and shows the entry points of a measure. In addition to the positive intended results, the model also takes accounts of other results, as well as the general conditions in place and external factors, and therefore attempts to replicate the complex reality of a range of factors which influence results and which are often difficult to be measured.

When applied to education, this means that no single clearly ascribable effect of education can always be assumed. On the other hand, it also points to the fact that changes brought about by education themselves in turn affect education, both in its institutional form as an education system and in its ontological form as a social and cognitive foundation. Another factor to bear in mind is that education is a complex phenomenon which fulfils a range of individual and social functions, from ensuring people's capacity to work, participation in democracy through to personal development.

For the purposes of the development debate, it therefore makes sense to develop a relational understanding for education. This is important since the dominant perspective on education within international DC since the 1960s has, for the most part, been functionalist in nature, based on human capital theory². This perspective assumes that effects are linear. A relational understanding, on the other hand, implies that education impacts existing social relations, just as this impacts education. Such an understanding highlights how, under certain conditions, education can have unintended effects, such as exacerbating conflicts or

perpetuating social inequalities. Although such an understanding of education may appear awkward at first glance, it is however necessary and helpful in order to avoid undesired effects. Knowing that education needs appropriate prerequisites and conditions in place so as to be able to support development is a basis for ensuring these effects.

The objectives of this argumentation framework follow the GIZ results model. In both cases, the change processes which DC projects and programmes wish to influence need to be made visible. The aim of the argumentation framework is therefore to carefully examine those social change processes which are assumed to be caused by education.³ It also aims to describe the necessary conditions under which these processes are able to produce the intended effects in support of development.

¹ Cf. http://www.giz.de/de/ueber_die_giz/518.html (in German).

² For an introduction to human capital theory, see Hummelsheim/Timmermann (2009)

³ The aforementioned feedback processes of the effects triggered by education cannot be examined under this study.

3 Results of the literature analysis

This study analyses the current academic debate with regard to its assertions on the effects of education on development. To this end, it carries out a secondary analysis of relevant empirical case studies, literature reviews and synthesis reports. Information regarding the body of literature and the literature actually selected is set out below together with a description of the methodological and conceptual restrictions. The findings are then quantitatively analysed, summarised and discussed.

3.1. Body of literature and literature selected

When analysing the literature for this argumentation framework, it became apparent that the literature available on the effects of education is vast for some sectors or social fields while the number of studies for other sectors varies from very few to none at all. The latter applies in particular to the area of environmental sustainability for which no empirical studies on the effect of education were found, despite the UNESCO Decade of Education for Sustainable Development. For the economic sector, the picture is the opposite. A sufficient degree of research has also been carried out into the relationship between education and health as well as between education and anticipated social benefits, most notably social cohesion. The body of literature is considerably greater for OECD countries than it is for developing countries, although the amount of research geared specifically to the latter has grown in recent years.

From a methodological standpoint, the number of quantitative studies from the field of education economics or related disciplines far exceeds the number of qualitative studies. Overall, the studies reflect a broad spectrum of conceptual and methodological approaches. Consequently, the range of findings is also extensive and the assertions made are occasionally contradictory.

Although publications focusing on developing countries were preferred for this study, a number of influential or particularly relevant studies on OECD countries were also taken into account. Given the extensive range of available literature, the breadth of the aspects to be studied and the short study period, no claim can be made as to having recorded the body of literature on the individual aspects in full. Among the selection criteria were academic stringency as well as the professional and/or political influence of the respective publications while other factors included the degree to which the publications are representative of certain methodological and conceptual approaches, in keeping with the intention to highlight the range of different academic viewpoints.

Due to the aforementioned restrictions it was necessary to not only take into account empirical case studies, but also literature reviews and synthesis reports. A number of the individual case studies used form part of the body of literature reviews on the same topic and of synthesis reports on more extensive research projects. This is marked by footnotes in the relevant cases. Potential duplication in the listing of findings was taken into account.

A total of 43 studies were examined for this argumentation framework. The tables below show the breakdown of publications based on underlying method as well as the breakdown of findings by sector and social field.

Table 1: Breakdown of studies by underlying method

Underlying method	Number of studies examined
Quantitative	16
Qualitative	5
Mixed quantitative-qualitative	3
Literature reviews	16
Synthesis reports	3
Total	43

Table 2: Breakdown of studies by sector

Sectors / Social fields	Number of studies examined ⁴
Income	9
Economic growth	9
Poverty reduction	4
Social benefits (e.g. social cohesion, empowerment)	8
Culture	1
Health	15
Early childhood development (motor, cognitive, social)	4
Nutrition	4
Environmental sustainability	1
Democracy	6
Conflict prevention	4
Gender	8
Inclusion	2

3.2 Methodological and conceptual restrictions

Many of the quantitative studies, in particular those relating to the economics of education, have theoretical foundations which are restricted in disciplinary terms. With regard in particular to educational sciences and the sociology of education, the level of research in such areas is barely considered in these studies. The variables used therefore sometimes raise doubt as to whether they actually also reflect the phenomenon to be studied. For instance, in attempting to measure educational quality based on PISA results (Hanushek/Woessmann 2007), the criticism from

an educational perspective that PISA tests focus on scientific knowledge (Seitz 2003) should be taken into account, together with the complex discussion on educational quality as a whole (Lang-Wojtasik 2005, Riddell 2008, Soudien 2012). Roughly the same can be said for measuring the development of democracy. When taking the Freedom House Index as a yardstick (Appiah/McMahon 2002), its western and economically liberal bias should be taken into account; it may be the case that this index fails to sufficiently portray the complex governmental and social make-up of many developing countries. Doubts also arise as to how to deal with causal mechanisms which in many quantitative studies relate only to the correlations that are measured. It is therefore questionable whether, beyond their immediate statistical assertions and without any thorough examination of the respective context, the findings should be used as a basis for policymaking.

The comparability of findings across sectors is subject

⁴ Some studies look at more than one sector which is why the total of this column exceeds the total number of publications studied (43).

to a terminological restriction. Studies looking at the effects of education from an economic perspective inevitably employ different educational terms and concepts (education as an economic input variable) to studies which analyse the relationships between female literacy and empowerment (education as a tool for empowerment) or with regard to social inequality.

Against this background, the most meaningful studies appear to be those which put an intensive theoretical and conceptual analysis – if possible from the perspective of different academic disciplines – before the measurement of the phenomenon to be studied. Ideally, quantitative and qualitative methods within a study or within a larger project are combined. As a rule, such studies involving the derivation of causalities from pre-identified contexts are cautious by nature and focus on the examination of pathways, i.e.

the processes and mechanisms as to how effects can occur. One example of this plurimethodological, interdisciplinary and theory-led approach are the studies conducted by the University of Cambridge's RECOUP Consortium⁵, which examines the relationships between poverty, education and development in Pakistan, India, Ghana and Kenya.

3.3 Quantitative analysis of the findings

The attempt to analyse in quantitative terms the literature selected for study initially reveals very different results regarding the question as to whether the effect of education is direct and noncontext-bound or whether it is context-bound:

Table 3: Nature of the relationship between education and the phenomenon examined

Nature of the relationship between education and the phenomenon examined	Number of publications examined
No relationship	2
Non-context-bound relationship	20
Context-bound relationship	14
Other findings ⁶	7
Total	43

Table 4: Factors determining the effect of education

Factors determining the effect of education	Number of publications examined
Educational quality	4
Institutional environment (political stability, rule of law)	3
Inequality	3
Social and cultural norms	7
Inclusion in the mainstream education system	1

⁵ *Research Consortium on Educational Outcomes and Poverty (RECOUP)* – <http://recoup.educ.cam.ac.uk/>.

⁶ This relates, for example, to the fact that mixed studies reveal non-context-bound effects in quantitative examinations, yet record context-bound effects in qualitative examinations, or to the fact that effects were identified which were different to those expected..

The way in which the nature of the relationship between education and the phenomenon examined in each case is assessed depends initially on the method applied. Quantitative studies are more likely to conclude that context has no bearing on the effect of education. However, the method is not the sole criterion since a number of quantitative studies also emphasise that context dictates the effect of education, whereas some qualitative studies very clearly reach the opposite conclusion. The nature of the phenomenon examined is a further criterion. For example, context is generally regarded as having no bearing on the microeconomic relationship between education and private income whereas the effect of education on changing gender relations is generally shown to be contextbound.

In terms of the contextual factors which determine or influence the effect of education, interesting patterns emerge. Some factors can be clearly attributed to one sector, such as the importance of the institutional environment for economic growth. Studies focusing on various sectors – and which differ in methodological and conceptual terms – identify other factors, most notably educational and social inequality as well as social and cultural norms.

3.4 Summary and discussion of the findings

The methodological and conceptual range of publications examined sometimes leads to contradictory findings regarding the effects of education. For the purposes of this argumentation framework, the question therefore arose as to which findings can be classed as valid. Given the extensive range of theoretical and methodological approaches considered when discussing the effect of education, this review worked on the assumption that any findings acquired from a number of publications, ideally which differ conceptually and methodologically, are valid.

These findings, disaggregated by sector, are summarised and discussed below.

Economic development: income, growth, poverty reduction

At the micro level, virtually all studies identify a clearly positive relationship between investment in education and private returns. Monk/Sandefur/Teal (2008), in their study on the private returns to apprenticeships in Ghana, are alone in concluding that no increase in earnings can be found, except for people who have done apprenticeships without any prior education.

According to Psacharopoulos/Patrinis (2004), the global average private rate of return to each additional year of schooling, measured in terms of personal income, is 10%. The highest returns are recorded in poor countries. However, whereas earlier literature refers to returns to investment being considerably greater in primary than in other levels of education, evidence from more recent literature tends to indicate the opposite. It is agreed that returns have increased for higher levels of education. Although Psacharopoulos/Patrinis (2004) confirm the earlier trend of rates of return falling as the level of education increases, recent studies (Aslam/Kingdon/De/Kumar 2010, Bonal 2007, Colclough 2012, Colclough/Kingdon/Patrinis 2010, Palmer 2007) detect an inversion in this trend.

The findings at the macro level are inconsistent. Some studies (Gyimah-Brempong 2011, Lutz 2009, Hawkes/Ugur 2012, cf. summary in Cameron/Cameron 2005) establish a clear relationship between education and economic growth. However, Hanushek/Woessmann (2007) highlight that this relationship is much stronger in terms of educational quality (measured in terms of the increase in cognitive skills as a result of educational tests) than it is for the number of years of schooling, which is the traditionally acknowledged yardstick. They also point to the fact that educational investment alone is unable to guarantee economic growth; a conducive environment consisting of functioning institutions as well as political and macroeconomic stability must be in place as well. This argument is also put forward by Bloom/Canning/Chan (2005). Other studies produce negative or mixed findings. Pritchett (2001) establishes that the massive expansion in education in developing countries has not led to the anticipated economic growth, thereby concluding that the strong correlation between investment in education and private returns at the micro level cannot directly be transferred to the macro level. He also regards the institutional and macroeconomic environment as being a determining factor as to whether or not education can positively impact growth. Only one of the publications examined focuses on which levels or types of education make the highest contribution to economic growth. In his quantitative study on Africa, Gyimah-Brempong (2011) identifies a positive growth effect for investment in all levels of education, with the effect being greatest for tertiary education. Lutz (2009) indicates the key importance of secondary education as a prerequisite for technology transfer, thereby reinforcing the traditional assumption (Barro 1998) that secondary and post-secondary education are drivers of growth. In referring to the fact that tertiary education has in the past been neglected by international DC, Bloom/Canning/Chan (2005) underline the contribution made by higher levels of education to growth through the transfer of technology and by enhancing productivity. Appiah/McMahon

(2002), on the other hand, highlight the need for a broad level of primary education, due not least to the many social and societal outcomes which they claim in turn indirectly benefit growth. For Hanushek/Woessmann (2007), broad-ranging basic education as well as a (small) well-trained workforce are essential to a country's economic growth. The study by Choi (2010) on the pathways of educational effects in South Korea suggests that different stages of economic development reveal specific educational requirements and also that it is the role of education policy to anticipate economic development and to ensure that there is sufficient human capital available to handle such development. South Korea is often held up as an example of the important role that educational investment plays in economic development. This was highlighted most recently in the latest Education for All Global Monitoring Report (UNESCO 2012) which, in a comparison with several developing countries (Ghana, Tunisia, Democratic Republic of Congo and Colombia), sets out how the interaction of economic and education strategies formed an important foundation for South Korea's rapid economic growth. However, Choi's study (2010) also shows that other factors besides education were crucial to South Korea's success. For instance, the importance of the state, which was responsible for central planning and steering of both the economy and education policy, is emphasised.

Those studies focusing specifically on poverty give a complex picture of the effect of education. The assumption made in the qualitative study conducted by Bonal (2007) is that the expansion of education in Latin America throughout the 1990s failed to have any impact in terms of poverty reduction. According to Bonal, for education to reduce poverty and inequality, consideration would need to be given not only to the specific conditions of poorer sections of society in terms of their possibilities for participating in education but also to mechanisms which reinforce educational inequality. In a study on China, Colclough (2012) uses this country as an example to show that private returns to education for poor sections of the population are very much lower than those for middle or high income groups. Like Bonal, Colclough stresses that the specific conditions of poverty and the difference in the quality of education available to the respective income groups makes it more difficult to bring the potential returns to education to bear. Furthermore, both authors emphasise the fact that the inversion of rates of return corresponding to educational level means that barely any material benefits are likely to accrue from only a few years of education, in particular if primary schooling has not been completed. However, Colclough qualifies this by stating that such a phenomenon may be different for the sizeable self-employed sector in developing countries than for formal employment (Colclough 2012, Colclough/Kingdon/Patrinis 2010).

The effect of education on company productivity – an area which has seen little research – depends heavily on whatever system of vocational education is prevalent. In her literature review on increasing company productivity through further education and training in countries with a 'dual system', Backes-Gellner (2006) concludes that a clear relationship between education and company productivity can be identified. Moreover by including other measures (such as personnel development and innovation), this relationship is, or can be, enhanced. However, it is uncertain whether this finding can be applied to the very different context of developing countries⁷. Overall, considerable research is required into the effect of vocational education in developing countries. Palmer's study on Ghana (2007) points to the fact that effects in terms of facilitating employment and increasing income are in most cases simply assumed. This is the case despite the lack of empirical studies which is why he calls for more research, most notably with regard to assumed poverty-reducing effects. In a synthesis report of RECOUP studies on vocational education, Colclough (2012) provides evidence of a sobering trend, namely that vocational education has not helped those affected to escape the cycle of poverty in the contexts examined. Adams (2007) takes a fundamentally more optimistic view of the role of vocational education while at the same time emphasising that it can only improve young people's access to employment under certain conditions (existing networks with the world of work, sufficient economic demand). The need for research and the modest findings point to the fact that the role of vocational education in developing countries has traditionally been neglected, especially since the prioritisation of formal primary education. This is also reflected in the most recent Education for All Global Monitoring Report (UNESCO 2012) which is devoted to the issue of 'Youth and Skills' and which underlines the importance of vocational education to economic growth and employment.

Nevertheless, this report also establishes that vocational education needs to be part of extensive economic strategies as well in order to be able to promote growth and employment. In summary, it can be taken as a valid finding for the economic sector that investment in education increases private rates of return and that such returns – contrary to the academic assumptions made in the 1990s – increase in line with the level of education. The only valid finding for the macro level is that investment in education does not automatically lead to growth; for this to happen, a favourable institutional environment is required. As far as poverty reduction is concerned, the valid findings are twofold: while there is essentially a positive

⁷ As a result, the study was neither included in the matrix nor considered in the evaluations.

relationship between investment in education and poverty reduction, this can be reduced or cancelled out by educational inequality (unequal access to education, unevenly distributed educational quality and different levels of marketability of educational qualifications on the labour market). Research is required into the effect of vocational education, especially on poverty reduction, as well as into the specific impact of different levels and areas of education.

Human development: social cohesion, health, early child development, nutrition

The assumption that education impacts positively on social cohesion has a long tradition in both the educational sciences (Heynemann 2002/3) and economics of education. When analysing literature, it should therefore be remembered that different research approaches and methods will produce different definitions of terminology, thereby making any comparison difficult. The findings in the literature examined here are accordingly mixed. In a quantitative study on 15 OECD countries, Green et al (2003) do not identify any positive relationship between education and social cohesion yet do establish a negative relationship between educational inequality and social cohesion. Bonal's findings (2007) follow a similar direction. Other studies (e.g. Appiah/McMahon 2002) refer to direct and indirect positive effects of education on social cohesion (measured in terms of the crime rate) as well as on a series of other aspects of human development.

Due to the contradictory findings, no valid assertions can be made regarding the relationship between education and social cohesion.

In the area of health, the findings note a positive correlation between investment in education and an improvement in health indicators (both for the persons affected as well as for their children) and these may be regarded as valid. However, the assertions relating to the specific type of education represented by life skills programmes are more cautious. The literature reviews by Yankah/Aggleton (2008) and Clarke/Aggleton (2012) in the area of HIV/AIDS prevention find that such programmes have positive effects on the knowledge of participants and, in a small number of cases, on their behaviour as well. However, the same programmes do not improve biological indicators, such as the rate of infection. These studies show that the effectiveness of life skills programmes depends on several factors (duration of the programme, context in which the programme is being carried out, etc.) and that they need to form part of a broad overall strategy on HIV/AIDS prevention in order to have any effect.

Both in academic debate and DC practice, the current assumption is that investment in early childhood development is very important (GTZ 2009). Long-term empirical studies on this subject are available in particular for the USA, for which Heckman (2000) and Cunha et al (2005) identify the highest returns to investments in early childhood education. The number of empirical studies is too small to be able to confirm such a thesis for the context of the global South. However, the publications studied for this paper, on Africa (Hyde 2008), Latin America (Schady 2006) and the Philippines (King 2006) identify positive impacts on the physical, cognitive and social development of the children in question as well as on their subsequent learning performance. This can be regarded as a valid finding for this particular field. Integrated nutrition and education programmes are shown to be most effective.

In the majority of cases, the relationship between education and nutrition is examined in an inverse impact curve, namely looking at the positive effects of better nutrition on learning. Only a small number of studies were found for the aspect of interest here and these proved difficult to compare. These studies describe education as having a positive impact on indicators associated with nutrition (height and weight, long-term nutrition). However, the restricted comparability⁸ of the literature prevents these findings being regarded as valid.

Environmental sustainability

No significant publications were found on the relationship between education and environmental sustainability. Only as a sub-aspect of their study on the social outcomes of education and their feedbacks on growth in Africa do Appiah/McMahon (2002) mention that, based on statistical simulations, the positive effects of education on deforestation and environmental destruction (via lower population growth and higher economic growth) would only be expected after a lag of 25 years or more. Hypothetical assertions of this kind do not provide a sufficient basis on which to conclude valid findings.

Governance: development of democracy, conflicts

As far as the development of democracy, democratic attitudes and political participation are concerned, a positive relationship is identified, although this is rather modest in some studies (Mattes/Mughogho

⁸ The studies have different subjects of examination: Mukudi (2003) studies the effects of participating in education in the formal school system, while Bhutta et al (2011) look at the effects of participating in non-formal nutrition programmes which include educational components.

2009, Stromquist 2005). In their quantitative study on Africa, Mattes/ Mughogho (2009) describe the positive influence of education on the ability to form critical opinions and evaluate political processes. However, they find no relationship between participation in education and more widespread democratic attitudes. The relationship they identify between participation in education and political participation, moreover, is only very small. The fact that there is a positive relationship between education and the development of democracy may therefore be regarded as a valid finding, even though this link is weaker than expected in some aspects (most notably democratic attitudes and participation).

The findings on education and violent conflict are mixed. In their review of literature, Østby/Urdal (2010) report mainly positive findings, such as the effect education can have in helping to reduce conflicts, for example. However, they also point out that educational inequalities may also exacerbate conflict if they combine with other forms of discrimination. Seitz (2004) focuses on this aspect. He underlines that no assumption can be made regarding the intrinsic impact of education to promote peace. For education to contribute towards reducing conflict, it not only needs to be inclusive but must also practice and preach tolerance as well as a positive attitude towards diversity. Thyne's quantitative study (2006) notes that the effect of education in reducing conflict is not context-bound. Such an effect can be reinforced by factors like the equitable distribution of educational investments, the availability of health services and secondary education for young males. Gyimah-Brempong (2011) identifies a positive relationship linking tertiary education with a reduced susceptibility to conflict and greater stability in Africa. However, there is no validation of any such relationship existing for other levels of education. In terms of the relationship between education and conflict, the fact that education only has a pacifying effect if it breaks down educational inequalities, permits diversity and encourages inclusion, may therefore be regarded as valid findings.

Gender

Measuring the effect of education on expected outcomes in connection with gender relations has a very long tradition. Together with statistical findings, studies adopting a functionalist approach prove that investments made in educating girls and women bring considerable benefits to society. For example, they are instrumental in lowering fertility rates, improving health indicators and enhancing children's academic performance. These findings are confirmed by a series of recent publications which are studied here (Levine et al 2012, Andrabi et al 2009, Aslam/Kingdon 2010, Lutz 2009, Appiah/ McMahon 2002). Underpinning the

functionalist approach is also the assumption that education has a positive impact on gender equality and women's empowerment. In this regard, Appiah/ McMahon (2002) and Lutz (2009) refer to the importance of universal secondary education. Gyimah-Brempong (2011), on the other hand, establishes that the strongest link between education and female political participation exists in tertiary education. Overall, the findings into the relationship between education and women's empowerment are more modest than in the area of health. For adult literacy in particular, it is repeatedly pointed out that the capacity of education to change existing gender relations depends heavily on the context in question. Education is seen as a factor contributing towards women's empowerment, although the role it plays is not deemed to be sufficient enough.

Recent debate in the field of social and educational sciences on the relationship between education, gender and development reveals an ever greater rejection of the functionalist approach (Robinson-Pant 2004). However, the rights-based approach is also criticised, the accusation being that it is essentially restricted to calling for gender equality in terms of educational participation (Unterhalter et al 2010), as set out in the EFA initiative and the Millennium Development Goals (MDGs). This is contrasted with a relational approach for which gender relations are part of and an expression of material and immaterial power balances in the home, community and society (ibid. 6). When applied to education, this means considering the potential role of education on gender stereotyping and gender discrimination, particularly of the formal education system. Findings in the relational school of thought also note a positive impact made by education on empowerment. However, these correlations are becoming harder to identify from a statistical viewpoint and, in terms of their effects, are described as being more indirect than is the case in the literature adopting a functionalist approach (Robinson-Pant 2005, Patel 2005). The studies also firmly stress the influence of contextual factors. In their empirical study on Pakistan, Bhatti/Jeffrey (2012) conclude that although education is a factor which encourages women's self-determination regarding marriage and reproduction, the key aspects are nevertheless the cultural and social norms prevailing within the family and the community.

The influence of education on gender, not only in terms of its effect in lowering fertility but also in improving health and enhancing children's academic performance, is positively validated. The fact that the effect of education is highly context-bound can also be highlighted as a valid finding for women's empowerment.

Against the background of the approaches already outlined, there is no clear answer to the question of

whether and how the cross-cutting issue of gender can be viewed as a factor which strengthens the anticipated effects of education. The functionalist approach described above confirms that investments in the education of women and girls can have such a strengthening effect, for example in the form of improved academic performance among children of educated women (Andrabi et al 2009, Levine et al 2012). The relational approach, which is subsequently described, does not question these findings but does stress that the functionalist approach is insufficient to alter discriminating gender roles.

Inclusion

There are only a very small number of empirical impact studies for developing countries on the issue of educational inclusion. The publications examined here are qualitative case studies of limited significance. Moreover, the results which they yield are inconsistent. Singal/Jain (2012) are unable to detect any improvement in the lives of disabled people as a result of participation in education. Ndinda (2005), by contrast, identifies the positive effect of inclusive education (as opposed to segregated education) on learning and social integration of the disabled students in question. No valid findings can therefore be derived for this area although it is clear that major research is required in this field.

In most cases, the understanding of inclusive education in the literature covers the way in which educational institutions treat people affected by disability. However, in the development context especially, it makes sense to define inclusion more broadly since access to education in developing countries is often also refused to other disadvantaged sections of the population, such as ethnic or religious minorities, the rural population or those particularly affected by poverty. Such a broad understanding as that which also forms the basis for Germany's development cooperation activities in supporting education (BMZ 2012 b) allows inclusion to be recognised potentially as an instrument for strengthening the effect of educational interventions. A number of the findings listed here, most notably those on educational inequality, should be considered within this framework. This is explained in the next section.

3.5 Factors designed to enhance the effect of education

The aforementioned contextual factors of quality, institutional environment, inequality, social and cultural

norms and inclusion, are also key areas of intervention for enhancing the effect of education. In addition, the publications examined reveal two additional factors, namely early childhood development and integrated interventions, which contribute considerably to the pro-development impact of education measures. Each of these factors is described in more detail below.

Quality

The controversies surrounding the definition of educational quality in the academic sphere are the same as those regarding implementation strategies in education policy and DC. This complex debate cannot be set out here. The following remarks are therefore restricted to the discussion of the relevant publications studied here as well as a few selected studies on educational quality in connection with developing countries (GPE 2012, Riddell 2008)⁹.

Although educational quality had been an implicit intervention objective of DC since the 1960s, barely any attempt was made to measure this. Education strategies focused on input factors such as infrastructure, teacher training or education spending, in the hope that these would automatically help improve the quality of education. Against the background of the trend in OECD countries since the 1990s towards measuring learning performance, the question regarding the need to record learning outcomes also began to be heard in DC¹⁰. The assumption in development discourse that educational quality is crucial to the effect of education was made, at the latest, in the study by Hanushek/Woessmann (2007) which highlights cognitive skills rather than educational attainment as being key to economic development. This study, which measures educational quality on the basis of PISA test results, has also significantly increased awareness of the fact that learning outcomes should be used as the yardstick for statistical studies, not the number of years of schooling completed.

Nevertheless, the international trend towards measuring learning achievement has increasingly consolidated the dominance of economic approaches in the debate on education. In developing countries too, the discussion regarding educational quality is now conducted primarily in terms of measuring learning achievement. From the perspective of educational sciences, however, fundamental doubts are repeatedly expressed about equating educational quality with performance on internationally standardised tests.

⁹ Both studies include summaries of the current literature on educational quality in connection with developing countries.

¹⁰ See, for example, the World Bank's new education strategy entitled 'Learning for all' (The World Bank 2011), as well as the GPE study 'Results for Learning Report' (2012).

Reference is also made to the problematic assumption which is spread by this trend, namely the universality of western knowledge (to the detriment of cultural and epistemological diversity) and of ostensibly neutral instruments which are used to define and measure quality (e.g. Soudien 2012).

In a comprehensive analysis of academic literature, Riddell (2008) looks in detail at the problem caused by the different methodology of economic approaches and those based on social and educational sciences in the debate on educational quality in developing countries. She argues essentially in favour of defining educational quality in the respective regional, national and local context and applying international research findings to these contexts. Overall, in both the academic and the political debate, a number of factors are identified as being crucial to educational quality. These include the language in which students are taught (their mother tongue wherever possible), textbooks and instructional materials for teachers, teacher training and development opportunities as well as teacher supervision, active teaching and student-centred methods, school amenities and class size, parental literacy, good student health and nutrition, community and parental involvement as well as early childhood development (GPE 2012, 229 and Riddell 2008, 48).

However, Riddell (2008) stresses that these factors should be seen as no more than benchmarks which can be used to suggest ways of identifying factors for educational quality in the respective context being examined. Overall, Riddell (*ibid.* 41) places the discussion surrounding educational quality in a broader social framework. She points out that attitudes, both of those directly involved in the education process (students, teachers, parents) and of the community, as well as the educational attitudes prevailing in society often have a determining influence on the quality of education. For instance, if students and parents insist on English (or any other international language) being the language of tuition – even if this is shown to hinder the learning process – then the academic finding of the importance of teaching in the students' first language is of little practical value. Similarly, the effect of incentives for teachers will only be limited if they fail to bring about an improvement in status (as recognised by the teachers themselves and the communities they are serving).

Beyond the necessary contextualisation of internationally discussed quality factors, the aim of the debate outlined above is to encourage people to consider educational quality in a different light. In particular, this means that the attainment of internationally defined learning standards should not be viewed as the primary objective of high-quality education provision. Instead, it should be assumed that educational pro-

cesses will need to produce learning outcomes which are relevant for the learners' respective environments in terms of improving their lives and enhancing the development potential of society. Against this background, taking a sensitive approach to local knowledge and culture as well as educational traditions is an important prerequisite for educational quality. In a globalised world, locally defined learning standards need to relate somehow to international standards. However, this relationship has to be subject to constant redefinition. In this way, learning performance measurements could be based on new and different foundations and hence substantially contribute to a form of educational quality, which would be defined locally and would be realistic to achieve.

Besides the issue of measuring learning performance as addressed above, and the discussion surrounding concrete factors of educational quality, the literature reviewed for this argumentation framework reveals the dimension of poverty as an unanswered issue of educational quality (Bonal 2007, Colclough 2012). This is looked at below in connection with inequality.

Inclusion and educational equality

In the studies on different areas (social cohesion, conflict, poverty) which have been examined for this paper, social inequality (in terms of income, social status, rights) and educational inequality (defined as unequal access to education, discrimination in the education system and the failure to give equal recognition on the labour market to comparable educational qualifications) are described as key contextual factors determining the effect of education (Bonal 2007, Colclough 2012, Green/Preston/Sabates 2003, Østby/Urda 2010, Seitz 2004). The stronger the level of income inequality and the greater the social disparities based on ethnicity, religion, gender, etc., the more likely it is that education will reinforce these as opposed to evening them out. Education systems in countries where there are major social disparities mostly reflect such inequalities. Differences in income levels and discrimination of certain sections of the population may, for instance, be reflected in restricted access to education for the disadvantaged groups in question. Differences in the quality of education provision, together with differing marketability of the respective qualifications on the labour market, are another expression of educational inequality, which itself is inclined to consolidate social disparities (Bonal 2007). The greater the level of educational inequality, the more likely it will be that education fails in achieving its intended effect and will undermine social cohesion, exacerbate conflicts and widen income gaps (Seitz 2004). Strengthening inclusive systems of education (in the form of universal access to education and relative social equivalence of educational qualifications) and the levelling off of

social inequalities are therefore regarded as two key factors in enhancing the intended effects of education.

Institutional environment and integration in broader development strategies

The literature reviewed here on the relationship between education and economic growth concludes that a favourable institutional environment (defined as rule of law, political stability, openness to trade) is crucial in enabling education to contribute to economic growth (Hanushek/Woessmann 2007, Pritchett 2001, Bloom/Canning/Chan 2005). However, the literature only addresses in a peripheral fashion, if at all, the mechanisms in which education impacts economic growth. It cites two essential channels to this end: first, increases in productivity and second, better opportunities to use technology as a result of the greater skills and aptitudes brought about by education.

An economically liberal understanding of the importance of institutions in the development process is fundamental to the assumptions set out above. In this process, a particular set of institutions is assumed to help in promoting development. This set includes, on the one hand, areas such as the rule of law and political stability, which are beyond dispute in the academic debate. Other areas, for instance an openness to trade, liberal investment policy as well as the regulation of economic activities are, however, the subject of major controversy in development economics. There is a broad and divergent debate on the importance of institutions, especially regarding their specific configuration in individual policy areas such as industrial and technology policy. In contrast to liberal approaches, structuralism approaches underline the importance of local and national institutional and political and economic contexts. In view of market failures, the relevance of government intervention in the economy in the form of trading, investment and industrial policy, building on a comprehensive development strategy, is highlighted for the economic development process. Depending on the level of development and the specific context, this development strategy may look different in different countries (for a structuralism perspective on institutions and economic development, see Chang 2003, for example).

In order for the abovementioned beneficial effect of education on economic growth to come into play, there must be a corresponding level of demand for a well-trained workforce. A lack of demand for employees is a principal factor in explaining why skilled workers go abroad (brain drain) or move to unproductive activities. Under these circumstances, the effect that investing in education can potentially have on promoting growth is unable to take hold. In order to safeguard a corresponding level of demand, economic

investment is needed. As underlined by liberal approaches in economic sciences, for such investment to take place, political stability and legal certainty as well as a beneficial investment climate are crucial. In contrast, structuralism approaches refer to the importance of broader policy areas, such as industrial policy in particular, in order to ensure productive investments and thereby increase employment and demand for skilled labour. The integration of education policy in comprehensive economic policy and development strategies is also viewed as being pivotal to ensuring that the content and quality of training meets the level of demand by the private sector (e.g. Rodrick 2007). To this end, it is essential that enterprises and interest groups are involved in the designing of vocational education policies especially.

Cultural and social norms and values

A number of the studies used for this paper (Robinson-Pant 2005, Bhatti/Jeffrey 2012, Patel 2005) emphasise that cultural norms and values concerning gender relations can either restrict or even cancel out the positive effects of education. For example, participation in education often has a positive influence on the decision-making power of women as regards choice of partner and reproduction. However, in traditional societies especially, it is ultimately the dominant social and cultural conventions regarding marriage and sexual reproduction which govern whether or not potential changes to the status quo occur for the women affected. Another example is women's negotiation power on the division of domestic work. According to the results of the studies, this potential can only be increased as a result of women being educated if the predominant cultural and social norms provide scope for this. By virtue of social conventions, the increase in cognitive skills resulting from education can also lead to a stabilisation in gender relations, as opposed to a change of these relations. The former occurs, for instance, if women use their newly gained reading skills to read literature which reinforces gender stereotypes instead of questioning them (Farah 2005).

Educational interventions should therefore be preceded by a thorough analysis of the respective context, paying particular attention to social norms and values and gender relations currently in place.

Early childhood development

Investments in early childhood development (ECD) are seen as being extremely productive; besides encouraging early cognitive development in the best possible manner, they also help to break down any material and cognitive inequalities before children reach school age and then improve academic performance later on (Hyde 2008, GTZ 2009, Schady 2006).

ECD programmes represent measures which can not only reduce inequalities in the education system but also improve the quality of education systems. The first few years of schooling are a key period in determining whether or not a child will achieve educational success when older. However, in developing countries especially, these early years are often characterised by major challenges such as high numbers of pupils per class, tuition languages with which the children are unfamiliar, different age groups and social diversity (GTZ 2009, 36). Cognitive and social preparation bears therefore huge importance. ECD programmes are among the most efficient measures for reducing primary school dropout rates, a factor which is of relevance both from a financial standpoint as well as in terms of improving quality. Since underprivileged sections of the population in particular are affected by early school leaving to a disproportionately high degree, early interventions are an efficient way of supporting educational participation by these groups.

Despite the academic findings outlined above and which underpin the central importance of ECD, at both national level and in international DC, ECD in developing countries is a financially and politically neglected area for which there are barely any systematic national strategies in place. The level of research required into measuring the extent of early childhood deficits, efficient impact mechanisms, suitable methods of provision and financing options (Hyde 2008, Schady 2006) is massive. The findings available to date suggest that integrated programmes, which include components of nutrition and stimulation as well as parent counselling, are more effective at promoting the cognitive, social and health development of the children in question than programmes consisting of only one of these components (Schady 2006, 23). It is also recommended to focus ECD programmes on disadvantaged groups (Hyde 2008), yet at the same time to strive for universal participation (GTZ 2009).

Integrated measures

Combining educational interventions with other measures which are relevant to human development, is described as being beneficial to the effect of education. Of note here, for instance, would be the linking of education with the provision of health services, nutritional programmes and employment-relevant measures (Lutz 2009, Robinson-Pant 2005, Schady 2006, King 2006). The strongest effect, for example, is shown by early childhood development programmes where different components and measures for various target groups (parents, children, communities) are combined (see above). Similar statements can be made regarding the effectiveness of life-skills programmes in the prevention of HIV/AIDS. Interlinking with other components of prevention is generally considered

to be a basic requirement for these programmes to become effective (Yankah/Aggleton 2008).

As integrated measures often cover more than one sector and therefore affect the areas of competence of several responsible bodies, such interventions result in extra administrative expense both for DC and for the governments of partner countries. In addition to financial burdens, this is one of the reasons why there are difficulties involved in implementing integrated interventions in practice, despite a general awareness of the increased effect that such measures can bring.

4 Conclusions and recommendations

In addition to the direct and context-bound effects of education discussed in the findings under 3.4., the literature reviewed for this argumentation framework produces a range of conclusions that are relevant to DC. These are described below and are then followed by recommendations for DC interventions in the field of education.

- **Direct effects of education**

The result of the literature review is that education has direct positive effects on private income, on reducing the fertility rate, on the health both of participants in education and their children, on the learning outcomes of these children, as well as on some aspects of the development of democracy.

- **Context-bound effects of education**

Moreover, under certain conditions, the effects of education may contribute significantly towards economic growth, poverty reduction, empowerment and participation as well as to conflict prevention and conflict resolution.

- **Inversion of rates of return by levels of education and poverty reduction**

A finding of particular relevance to DC which should be briefly mentioned here is the inversion of rates of return by levels of education. Whereas the assumption until the end of the 1990s was that investments in primary education yielded the highest returns, the current literature reaches the opposite conclusion. This can have far-reaching consequences for DC. Based on the aforementioned academic findings in the 1980s and 1990s, the guiding assumption of the precedence of primary education due to its strong poverty-reducing effect is therefore called into question. With regard

to developing countries¹¹, the studies reviewed here (Colclough 2012, Colclough/Kingdon/Patrinis 2010, Aslam/Kingdon/De/Kumar 2010, Palmer 2007, Bonal 2007) establish that the benefits derived from just a few years of education are only very minor. These may not be sufficient to escape the multigenerational cycle of poverty. However, the above cited literature recommends securing universal participation in education by continuous investments in the lower levels of the education system.

These recent academic findings should prompt a rethink of traditional education strategies. First, education support needs to be holistic in design and incorporate all levels and areas of education. Second, more attention needs to be placed on developing efficient strategies which will allow poor and marginalised sections of the population to access higher levels of education, especially tertiary education. For if, as the literature studied reveals, the highest private rates of return are in this sub-sector, equal access to this level of education for those groups which have to date been underrepresented is important for the efficient and sustainable reduction of poverty.

- **Contextual factors and increased effect**

In addition to the findings on direct or context-bound effects of education, this meta-study reveals a series of contextual factors which are responsible for the pro-development effect of education. These include educational quality, the institutional environment, equal opportunities and inclusion as well as social and cultural norms. In order for education to

¹¹ The summary study by Colclough/Kingdon/Patrinis 2010 does not distinguish by different income groups among the developing countries. The other studies mentioned relate to the countries studied in each case (Colclough 2012 on India, Pakistan, Ghana and Kenya, Aslam/Kingdon/De/Kumar 2010 on India and Pakistan, Palmer 2007 on Ghana, Bonal 2007 on Latin America). No differentiation is made either by types of tertiary education. It is therefore clear that further studies should be carried out on this finding on account of its potentially far-reaching consequences for DC.

have the desired increased effect, it is essential that the aforementioned contextual factors are taken into account.

- **Need for research and increased effect**

Specific processes of effect materialisation also display the potential required to create an increased effect. A detailed understanding of these processes is needed so as to be able to identify concrete opportunities for intervention. There is a distinct lack of research in this area. In view of the fact that pathways of change are highly complex phenomena, it is advisable to give preference to theory-based, interdisciplinary and methodologically pluralistic studies, especially if research is to be used for guiding policy. Against this background, disciplinary research which is restricted in theoretical and methodological terms should be thoroughly examined and other theoretical approaches and methods should be taken into account. In this way, carelessness with causalities can be prevented from resulting in incorrect policy decisions (cf. the methodological restrictions under point 3.2). It would also be preferable to increasingly channel current findings from the field of educational science into the international discussion of DC, which is strongly influenced by economics, as well as into DC practice (McGrath 2010).

- **Need for research by area**

In addition, research deficits can be identified for the influence of education on environmental sustainability as well as a series of areas for which research has, to date, primarily considered the course of inverse effects, e.g. nutrition, corruption, rule of law. It also seems appropriate to strengthen research into the effect of a number of areas of education, for example the relationship between vocational training and poverty reduction.

The following recommendations are given for DC interventions in the area of education:

Recommendations regarding methodological and programmatic guidelines

- **Context-oriented programme structure**

Making context orientation a key factor of the programme design at different levels is recommended. Interventions should first be preceded by thorough examinations of the respective social, cultural, political and economic context. The aim of this is to ascertain in detail the perceptions of education and the social effects of the current educational structures

and processes which are prevalent in the area of intervention, as well as to identify the relationship between education and the intervention objective to be achieved. In the case of educational interventions focusing on poverty, for example, this would mean gathering data on mechanisms which prevent poor sections of the population from benefiting from the educational opportunities available. For educational interventions focusing on gender, the objective should be to analyse the existing gender relations and the role played in such relations by education. Context relevance should also be an essential aspect of programme planning, objective description, monitoring and evaluation.

- **Integrated measures**

In addition to supporting education per se, attempts should be made to combine educational interventions with other measures (health, nutrition, legal advice, empowerment, employment promotion as well as credit facilities, etc.). This serves as the best way in which to guarantee the sustainability of learning processes. Health or nutrition measures in school or in educational programmes can also act as an incentive to participate in education. Finally, the extensive impact of the formal system of education can be applied to other development objectives, e.g. vaccination campaigns or raising awareness of important issues.

In early childhood development and for life skills programmes, combining educational measures with other measures is seen as key to achieving the desired effects. In the area of adult literacy too, it is assumed that only the creation of ongoing learning opportunities and the chance to apply what has been learnt (such as libraries, reading clubs, etc.) safeguards learning achievements in the long term.

Integrated measures, especially if they are designed as nationwide programmes (such as in the case of ECD strategies) often pose major organisational challenges for the partner countries. An example of such challenges is the need to clarify responsibilities since the planned measures often fall within the remit of several different ministries (for ECD, these are usually the government departments for education, health and social affairs). The task which this creates for DC is to offer appropriate support to the partner countries. Where measures are organised separately, cooperation across sectors is recommended as early as during the design and planning of DC interventions. Context sensitivity and a focus on a number of different sectors

should generally be regarded as methodological principles which also apply to the recommendations below.

- **Complex gender approaches**

Education strategies should not only focus on equal access to educational opportunities for both sexes but – reflecting the fact that education can also perpetuate and stabilise gender relations – also be particularly gender sensitive in terms of teaching content and methods and framework conditions. In gender strategies, it is advisable to always take account of the specific forms taken by gender relations in the respective environment and to examine these in terms of their relationship to education. ‘Feminising’ and, potentially, undervaluing certain forms of education from a social perspective, should therefore be prevented. This is particularly the case in the area of adult literacy.

Recommendations on content-related priority areas

- **Reducing educational inequalities through inclusive and holistic education systems**

Levelling off inequalities in terms of access to, and the quality and assessment of education (and educational qualifications), and promoting education systems which are as inclusive as possible should be a central objective of educational interventions, especially so as to allow education to be effective in terms of reducing poverty, preventing conflict, ensuring social cohesion as well as integrating marginalised groups. A key factor to this end is undoubtedly a holistic and systemic promotion strategy and the support of partner countries in setting up inclusive education systems which incorporate all levels and forms of education. This means having a greater awareness of the promotion and systematic integration into education sector strategies of levels and areas of education which have hitherto been neglected, in particular medium and higher levels of education, early childhood development and vocational training. The permeability between formal and non-formal education should also be guaranteed.

With regard to the objective of poverty reduction, and in accordance with recent research findings on the increase in rates of return to education by level of education, safeguarding access to middle and higher levels of education for the poor is recommended. Adequate studies should be carried out on the subject of whether the availability of grants and credit facilities is sufficient for this purpose, as has been assumed

in the past within international DC. A detailed examination of the social implications of private sector involvement in the provision of education is also recommended. Steps should be taken to prevent any such involvement from reinforcing social selection mechanism in the education system.

In addition, teaching content and teaching methods need to systematically minimise discrimination within the education system. The refinement of pedagogical instruments which is required in order to do this should take place in dialogue with educational actors and by applying current academic findings¹² in a conflict-sensitive manner.

- **Guaranteeing educational quality**

Guaranteeing educational quality should also be a central objective of educational interventions. Given the complexity of the discussion on quality, the practical challenges facing DC in the education sector are undoubtedly considerable. On the one hand, these include creating instruments for the operationalisation of policies for educational quality. This suggests the use of a standardised measure of achievement. On the other hand, educational quality cannot be reduced to measuring learning achievement and, in developing countries especially, must be developed based on the particular context in place.

Providing a description of comprehensive solutions to these challenges would go beyond the scope of this study. There are nevertheless a number of fundamental recommendations. First, generally applicable definitions of quality need to be viewed with caution. In line with Riddell (2008), it is recommended to start with the collection of detailed information on local/national educational activities. Context-bound definitions of, and result mechanisms for educational quality, could be filtered from an analysis of the structure encountered among pockets of very high or very low quality. A sensible measure to take in any further steps would be to compare the quality factors identified nationally/locally with those from international literature and, accordingly, to refine these during discussions with the relevant actors (students, parents, teachers, the community, as well as companies and interest groups). Overall, it seems important to strengthen dialogue regarding

¹² The academic discussion on teaching methods and content is not the subject of this argumentation framework and cannot be set out here.

context-oriented perceptions of educational quality at local level and, in so doing, to take account of actors' attitudes to education. In addition, a sensible and realistic relationship between the national/regional quality debate and the international performance tests and the quality standards they prescribe should be developed.

The key task for DC arising from this outlined approach to educational quality is first the need to support partner countries financially and technically as regards implementation (data collection, formulation of strategies, policy dialogue with actors). Furthermore, the need for context relevance in the discussion on educational quality should be firmly established within the international donor dialogue. Educational interventions would, as a result, need to be geared towards the locally/nationally/regionally defined quality criteria.

Two aspects also arise from this meta-study which, where applicable, should be included in the dialogue with actors at either local or international level. The first of these is the relationship between poverty/inequality and educational quality. In principle, attempts should therefore be made to firmly establish quality strategies evenly throughout the entire education system so as to prevent educational quality becoming a selection mechanism. Second, this study highlights the importance of ECD in order to guarantee educational quality and equal opportunities. The result of this is the recommendation to DC to focus more strongly on ECD (see below).

- **Supporting early childhood development**

The traditional neglect of ECD in national education policies and international DC, while at the same time being aware of the quality-enhancing effect of early development, makes ECD an area of intervention which should be granted the utmost priority. However, at the same time, the challenges are also obvious. In most developing countries, there is neither meaningful data nor coherent strategies or sufficient financing options in place. For DC, it is therefore advisable to begin by helping partner countries to devise comprehensive ECD strategies as part of national education plans and to provide both technical and financial resources for the necessary preliminary work (data collection, research). In this regard, it is appropriate to devote special attention to disadvantaged sections of the population in the strategies, yet to strive overall for universal participation.

Here too, the principle of context relevance should be applied when selecting adequate forms of provision (support in families, on a community basis, in separate centres, public or private, etc.), pedagogical resources (consideration of local knowledge and local traditions) and in the training of personnel. Those academic findings recommending integrated programmes (both nutrition and stimulation, child and parent support) should also be taken into account.

At policy dialogue level, it is advisable – following on from EFA and MDG campaigns – to increase awareness of the importance of ECD. This applies both to the national level of the partner countries, where the efforts of relevant actors should be supported, as well as to the level of international DC dialogue.

- **Promoting a stable institutional environment and extensive development strategies**

Education can only contribute to economic growth provided the right institutional environment (rule of law, political stability) and conducive development strategies are in place. Although DC measures in the education sector have only a minor influence on the creation of such an environment, it is nevertheless advisable to bear this relationship in mind and to potentially contribute towards it by means of targeted educational and institutional capacity development measures. Conversely, however, educational interventions should not be disregarded if the institutional environment proves to be unsuitable. Instead, no automatic effect should be expected in such cases.

For the least developed countries in particular, brain drain often represents a massive problem which weakens both economic performance and key social sectors such as health and education¹³. Although economic demand for trained staff is the most important factor in mitigating this phenomenon (which in turn requires a stable institutional environment), DC can nevertheless contribute in this regard in the education sector. This contribution mainly involves supporting extensive systems of higher education at national and regional level and in promoting institutional partnerships and circular migration (for instance of

¹³ The effect of brain drain on developing countries is a subject of controversial debate in the academic arena. However, the mainly negative effects on less developed countries are widely acknowledged. For a summary of the discussion on the phenomenon of brain drain and its significance for developing countries, please see Langthaler/Hornoff 2008.

university staff). The knowledge and experiences from other areas of DC (such as migration, health) using such measures should be put to optimum use here.

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Links

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http://www.giz.de/de/ueber_die_giz/518.html

Research Consortium on Educational Outcomes and Poverty (RECOUP)
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United Nations / Millennium Development Goals
<http://www.un.org/millenniumgoals/>

UNESCO / Education for All Movement
<http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/>

Annex

Overview matrix of the literature studied¹⁴

Economy – Income	
Title of the publication	Psacharopoulos, George/Patrinos, Harry A. (2004) Returns to Investment in Education: A Further Update. In: Education Economics, 12:2, 111-134.
Research contents Design Method	Study of the recent academic literature on rates of return to investment in education based on human capital theory.
Findings	<p>Rates of return to investment in education fall as the level of education rises. However, compared to findings from the 1980s and 1990s, private returns to higher education have grown. Private returns continue to be higher than social returns.</p> <p>Overall, the average rate of return to a year of schooling is 10%. The highest returns are recorded in poor countries (Latin America and sub-Saharan Africa), returns to schooling for Asia are at about the world average, are lower than average in OECD countries while the lowest rates of return are found in the non-OECD European, Middle East and North African group of countries.</p> <p>Over the past 12 years, average returns to schooling have declined by 0.6%. At the same time, the average number of years of schooling has increased. Therefore, the conclusion drawn is that an increase in the supply of education has led to falling returns to schooling. Women receive higher returns to their schooling investments but returns to the primary school sector are higher for men. Women, however, experience higher returns in the secondary school sector.</p>
Conclusions / Recommendations	<p>The research gap between micro and macro level with regard to returns to education should be closed. Whereas there is ample evidence for the existence of positive returns to investment in education at micro level, this cannot be clearly determined for the macro level.</p> <p>Generally speaking, more research on the social benefits of schooling is recommended.</p> <p>For developing countries, more research on the relationship between investment in education and earnings is recommended.</p>

¹⁴ The statements made in this overview matrix (including methodological restrictions and conceptual information) have been taken exclusively from the publications examined. They do not contain any subjective views on the part of the author of this argumentation framework. Not all of the publications studied include conclusions or recommendations which is why this field occasionally remains blank.

Title of the publication	Aslam, Monazza/Kingdon, Geeta/De, Anuradha and Kumar, Rajeev (2010) Economic Returns to Schooling and Skills – An analysis of India and Pakistan. RE-COUP Working Paper No. 38. University of Cambridge.
Research contents Design Method	<p>The study investigates the economic outcomes of education for individuals in terms of access to the labour market and increased earnings. The relationship is examined for the factors 'number of years of schooling', 'cognitive skills' (measured in literacy, numeracy and health knowledge tests) and 'English language skills'. The findings are differentiated based on gender.</p> <p>The data was collected from two surveys of more than 1,000 households in India (in the provinces of Madhya Pradesh and Rajasthan) and Pakistan (Punjab province).</p> <p>This study looks not only at people in wage employment but also those in self-employment. In the past, this professional group was rarely surveyed yet it is important for developing countries since wage work represents only a small and shrinking part of the labour market.</p>
Findings	<p>The labour market benefits of education accrue from it providing access to better paid jobs and from raising earnings, based on education.</p> <p>The effects of education produce different results for men and women, as well as for rural and urban areas.</p> <p>India: Males in rural areas with a basic level of education are more likely to be found in unpaid family jobs (not, however, in agriculture) which suggests unemployment among the better educated. This phenomenon is not seen in urban areas, where the educated have good employment opportunities. The majority of female workers in rural areas are unpaid family workers or casual wage earners. The likelihood of them withdrawing from the labour market increases when they have a certain degree of education. In urban areas, labour market participation among women is low and is not influenced greatly by education.</p> <p>Pakistan: Participation in education is particularly beneficial for women in rural and urban areas after 10 years of schooling. Since there is only a small number of women with secondary or higher levels of education, the total number benefiting from education is limited to just a few. Among men, the relationship between education and economic benefits is much stronger.</p> <p>In both countries and for both men and women, the findings are similar, irrespective of whether cognitive skills or the number of years of schooling are used as indicators. In both countries, the effect of education is also significant for those persons working in agriculture, a fact which is often denied in other studies. The same applies to self-employed workers. In both countries, larger returns to education are seen for women in wage work as compared to men. This may be due to the scarcity of women with a specific education who are needed for particular jobs (nursing professions, female teachers).</p> <p>The study shows that rates of return increase with higher education levels. This contradicts the general scientific assumptions made during the 1990s that investments in lower levels of education would bring higher returns. In Pakistan, the returns are high at primary level and then again from higher secondary level onwards. In India, the returns are very high for the tertiary education sector. Moreover, the gender gaps in earnings diminish at higher levels of education.</p> <p>In comparing the factors of 'cognitive skills', 'number of years of schooling' and 'English language skills', it becomes clear that in India the number of years of schooling leads to the highest returns for men and women in wage work, followed by English language skills. In Pakistan, the correlation with access to better paid work and higher earnings is greater not only for the factor of number of years of schooling but also for cognitive skills. In both countries, education and cognitive skills increase earnings. However, in Pakistan especially, conservative cultures and social norms have a major impact and greatly restrict the potential outcome of education on the labour market in terms of gender equality.</p>
Conclusions / Recommendations	–

Title of the publication	Colclough, Christopher/Kingdon, Geeta/Patrinis, Harry (2010) The Changing Patterns of Wage Returns to Education and its Implications. In: Development Policy Review, 28:6, 733-747.
Research contents Design Method	Literature review on the returns to education in terms of private earnings in developing countries
Findings	<p>Overall, there is a trend in developing countries towards returns to primary levels of education falling while returns to investments in higher levels of education are increasing.</p> <p>This would appear to be due to an increase in the number of primary school leavers and a disparity between the expansion in education and the number of jobs available. The scarcity of resources means that in many developing countries, the growth in education has impaired the quality of schools.</p> <p>Possible consequences: a) Primary school education could lose part of its poverty-reducing effect. However, as long as private returns are higher than zero, it will continue to help mitigate poverty. b) Wherever a decline in school quality is also a factor, labour market demand for persons having completed primary education could fall.</p>
Conclusions / Recommendations	The inversion of returns to education should not reduce public funding for primary and secondary levels of education in favour of the tertiary level. For the latter, high private returns are enough of an incentive, provided that a functioning credit system provides poor sections of the population with access to tertiary education.

Title of the publication	Palmer, Robert (2007) Education, Training and Labour Market Outcomes in Ghana: A Review of the Evidence. RECOUP Working Paper No. 9. University of Cambridge.
Research contents Design Method	Literature review on the relationships between education, training and the labour market in Ghana.
Findings	<p>Returns to education:</p> <p>In contrast to previous findings, more recent research shows that returns to education are greatest for investments in higher levels of education. As far as fields of work are concerned, returns to education are shown to be lowest in agriculture. Given that calculations of returns to education are based on income, it should be noted that they may provide misleading information for policymakers due to the size of the informal sector in Ghana. Moreover, calculations of returns to education are not differentiated by different income groups. The poor quality of education and an environment which is not very conducive (low economic growth, shortage of jobs, lack of infrastructure, etc.) are regarded as reasons for declining returns.</p> <p>Vocational education</p> <p>Despite government intentions to the contrary, the population continues to value academic education over vocational education. The government and foreign organisations have made repeated attempts to reduce (youth) unemployment through vocational training measures. However, there is no empirical foundation to the assumed causal relationship. Corresponding programmes have not been evaluated. The importance of a conducive environment, most notably the labour market, is particularly apparent for vocational training.</p>
Conclusions / Recommendations	<p>Returns to education</p> <p>Falling returns on investments in low levels of education should not result in the abandonment of such investments. On the contrary, they are the basis for a good quality system of general education. Access to higher levels of education for poor sections of the population is to be guaranteed by means of targeted support. Given that the labour market situation in Ghana is not regarded as being conducive (no employment opportunities in the formal sector, no strategies for the informal sector), it is recommended that more attention be focused on the transition from school to employment.</p>

Conclusions / Recommendations	Vocational education More research is required to establish whether poor population groups make use of the vocational training on offer. Research should also focus on the multiple transitions to the labour market and the influence of the context (especially of the labour market) on the results of (vocational) training.
Title of the publication	Monk, Courtney / Sandefur, Justin / Teal, Francis (2008) Does Doing an Apprenticeship Pay Off? Evidence from Ghana. RECOUP Working Paper No. 12. University of Cambridge.
Research contents Design Method	Quantitative study on the returns to apprenticeship in Ghana
Findings	<p>Apprenticeships are by far the most common form of vocational training in Ghana. Almost exclusively, apprenticeships serve the informal sector.</p> <p>The result of the study runs contrary to the authors' expectations, namely that those persons having done an apprenticeship generally earn less than those who have not. This suggests a selection mechanism based on talent. The most important factor influencing return to apprenticeship is the level of apprentices' formal education. For persons without any formal education, an apprenticeship increases their earnings by 50%. According to the authors, one possible explanation for this may be the fact that apprentices without any formal education may well be atypically able while those beginning an apprenticeship having completed junior high school may possibly be of a low(er) ability. A second possible explanation is that an apprenticeship would appear to close off the path to more lucrative jobs outside of the informal sector.</p> <p>Men who have done an apprenticeship earn more on average than their female counterparts, although the difference is statistically insignificant. One reason for this may be that female apprentices, on average, have a higher formal education than male apprentices. The authors believe that this may possibly be due to the fact that non-monetary benefits of an apprenticeship could be more important for women than for men (likelihood of employment, social status).</p>
Conclusions / Recommendations	-

Economy – Growth

Title of the publication	Hanushek, Eric A. / Woessmann, Ludger (2007) The Role of Educational Quality in Economic Growth. World Bank Policy Research Working Paper 4122.
Research contents Design Method	Quantitative study of the relationship between educational quality and economic growth for 50 countries. Educational quality is defined as the development of cognitive skills measured using international school achievement tests, in particular the results in maths and sciences of the OECD's PISA tests and the IEA's TIMSS study.
Findings	<p>There is a clear relationship between the quality of education in terms of the development of cognitive skills and economic growth. This relationship is more significant than that which is traditionally assumed between the number of completed years of schooling and economic growth. However, the quality of education is only one of many factors which are related to growth. In the absence of other factors (in particular the quality of economic institutions such as property rights, the openness of the economy and the security of the nation), there is no guarantee that quality of education alone can bring about economic growth since it too can essentially lead to unproductive activities. In such cases, it has little growth-enhancing effect.</p> <p>The quality of teachers appears to be a key element for educational quality although there is still not enough valid evidence to support this.</p>

Findings	There are barely any indications that increasing resources for the education sector contributes directly to an improvement in student achievement. This also applies to developing countries. However, in order for further specific measures to be effective, providing schools with a minimum level of resources (availability of textbooks, infrastructure, ensuring the presence of teachers) appears to be a prerequisite. Overall, creating good incentive systems (including monetary incentives) seems to be a more effective way of improving teacher quality. These incentives include the introduction of competitive mechanisms among schools, autonomy of schools and accountability, in which case the measures must be regarded as being interdependent and mutually reinforcing.
Conclusions / Recommendations	Priority in developing countries should be given to systematically recording student achievement as this is an area in which there is currently too little evidence. It is impossible to develop efficient strategies without any valid findings. The international comparative tests that are currently used, such as PISA, may not be best suited for developing countries.

Title of the publication	Pritchett, Lant (2001) Where has all the education gone? In: The World Bank Economic Review, 15:3, 367-391.
Research contents Design Method	Macroeconomic study which addresses the question as to why the massive expansion in education in developing countries since the 1960s has not led to the anticipated economic growth.
Findings	<p>The data analysis reveals a contradiction between the micro level (substantial increases in earnings as a result of educational participation) and the macro level (investment in education does not have the impact on growth which microeconomic data suggest).</p> <p>The study provides three possible explanations as to why growth effects in developing countries failed to materialise:</p> <ul style="list-style-type: none"> • In many countries, investments in education have been devoted to unproductive sectors. • The demand for well-educated labour varies greatly between individual countries with the result that returns to education can either fall, stagnate or rise. In many countries, expanding the supply of better educated labour where there is stagnant demand for it can cause the rate of return to education to fall. • In many countries education has imparted knowledge and skills whereas in others it has not (poor quality of education). Nevertheless, in the latter case, individual rates of return to education can increase because employers may regard educational attainment as an indicator of certain characteristics (e.g. ambition). As a result, on an individual level, education can provide access to the labour market or to more lucrative professions.
Conclusions / Recommendations	Under no circumstances should the findings be used as the grounds on which to stop investments in education. On the contrary, investment is strongly recommended, especially in primary schooling. Instead, attempts should be made to reform the environment in such a way that investments in cognitive skills will pay off.

Title of the publication	Appiah, E.N. / McMahon, W.W. (2002) The social outcomes of education and feedbacks on growth in Africa. In: Journal of Development Studies, 38:4, 27-68.¹⁵
Research contents Design Method	Quantitative examination of the effects (net effects) of education on growth, health and other key indicators of development in Africa as well as of their indirect feedbacks on economic growth based on statistical simulations.

¹⁵ This study is one of the publications examined in Hawkes/Ugur (2012).

Findings	<p>Life expectancy The findings show a positive relationship between education and life expectancy, even when the variable of income is controlled.</p> <p>Infant mortality The effect of primary education of females and even more of the secondary education of females is highly significant in lowering infant mortality. However, taken together with increasing life expectancy, the effect of education is to increase population growth, the effects of which can result in problems for Africa.</p> <p>Population growth rates These rise initially (see above). Based on the simulation model, it is only from 2035 onwards that they stabilise. Poverty and inequality: The reduction in inequality appears to depend on whether primary and secondary education can be extended to large sections of the population, and particularly to rural areas.</p> <p>Democratisation The findings show that there is a relationship between democratisation and secondary education.</p> <p>Human rights The findings here reveal changes in dependency on democratisation and on higher secondary education enrolment, albeit lagged 10 years (simulation model), as well as on lower military budgets.</p> <p>Political stability The most significant determinant is per capita income. After controlling for this determinant, participation in education from the higher secondary level (lagged 20 years) and democratisation (which in turn is influenced by rates of participation in education) also have an effect.</p> <p>Environment There is an indirect relationship between environment and education via population growth, poverty and democratisation, although only after a time lag of 25 years.</p> <p>Crime Growth and inequality are the most significant determinants for serious crimes (e.g. homicide rates). Since crime data for Africa are poor, the statistical study was carried out using US data (the USA has a high homicide rate in relation to other OECD countries). This reveals a significant relationship with higher secondary education enrolment rates and lower unemployment rates (lagged two years). On the other hand, other crime rates rise with economic growth. This effect is therefore a negative externality of education. However, after controlling for the variable of growth, the crime rate falls as inequality and poverty are reduced. Both of these factors are indirect effects of education.</p> <p>Growth, investment, labour market The direct effects of primary and secondary education are shown to be not very significant. Instead, there is a relationship with the indirect effects of education through political stability, investment in physical capital (which in turn depends on political stability and enrolment rates) and population growth rates. The indirect effects of education are particularly important in unstable, poor countries (e.g. Sudan). As can be seen from the simulations, these indirect effects of education would account for approximately 91-95% of the total effects in such countries by 2040. However, in more stable economies (e.g. Botswana) this figure is only 48%.</p>
Conclusions / Recommendations	<p>The true returns to education are generally underestimated. Many of the effects of education on growth only become apparent indirectly and with a delay, such as the impact of participation in education on institutions or on political stability. However, the time lags of some delays are so long, particularly in countries with high illiteracy rates that investments in education may fail to bring about growth here; at best, they will only arrest economic and social decline.</p> <p>Increased investment in primary and secondary education is recommended.</p>

Title of the publication	Lutz, Wolfgang (2009) Sola schola et sanitata: human capital as the root cause and priority for international development? In: Philosophical Transactions of The Royal Society. Biological Sciences, 364, 3031-3047.
Research contents Design Method	Academic report summarising a number of recent reconstructions and projections for 120 countries, using the demographic method of multi-state population dynamics, as well as several case studies that assess the role of population growth and education relative to other development factors.
Findings	<p>There is a clear relationship between investments in female education, especially at secondary level, and improvements in infant mortality rates. It is also apparent that fertility rates for women with secondary education are much lower than for women who have either no or only some primary education.</p> <p>Education is a consistently significant determinant of national growth rates. In poor countries, it is shown that only the combination of universal primary education with broadly-based secondary education results in the kind of rapid economic growth which has the potential to provide the countries in question with a way out of poverty. However, the effects of investments in education only become apparent some time later.</p> <p>Education is a significant determinant of democratisation. In particular, female education is the most important factor in connection with more democratic societies and improved levels of civil rights and liberties.</p>
Conclusions / Recommendations	The formation of 'local units of human capital production' is recommended, i.e. the provision of universal and free good-quality schooling which is geared towards developing cognitive skills and is accompanied by nutritional and health services for students and their families.

Title of the publication	Hawkes, Denise / Ugur, Mehmet (2012) Evidence on the relationship between education, skills and economic growth in low- income countries: A systematic review. University of London.
Research contents Design Method	<p>Literature review on the relationship between education and economic growth in low-income countries (LICs).</p> <p>Analysis of 33 empirical and six theoretical publications using a meta-analysis approach.</p>
Findings	Overall, there is a positive and direct – albeit only minor – relationship between investment in human capital and growth in LICs. The degree to which human capital has an effect differs and depends primarily on the variables used. In most cases these relate to the number of years of schooling and enrolment rates which is why they do not measure learning success itself but rather the provision of education in LICs. The authors assume that by applying other variables, the effect of human capital on growth could be greater.
Conclusions / Recommendations	<p>The measurements used for education should be revised. This recommendation applies both to the fields of academia and policy as well as to the creation of databases.</p> <p>More research is required on the relationships between investments in education and growth.</p>

Title of the publication	Bloom, David / Canning, David / Chan, Kevin (2005) Higher Education and Economic Development in Africa. Harvard University.
Research contents Design Method	Literature review and quantitative statistical examination in 103 African countries on the relationship between higher education and economic growth in Africa.

Findings	<p>For private individuals, higher education can contribute to better employment prospects and higher salaries. These benefits may therefore result indirectly in better health and in improved quality of life, which in turn has positive effects on productivity.</p> <p>Public benefits include an increase in tax revenue and greater levels of consumption by people with higher education, which in turn is beneficial for society as a whole.</p> <p>As far as growth is concerned, higher education can help national economies to keep up with more technologically advanced countries since higher education graduates are likely to be better able to use new technologies, undertake advanced education and generate entrepreneurship.</p> <p>Indirect positive social effects of higher education are bettertrained teachers for primary and secondary education, bettertrained health workers (which may raise productivity) as well as improved governance and a stronger leadership and business culture (which has positive effects on the establishment of a stable policy environment and functioning institutions as a prerequisite for economic growth).</p> <p>However, none of the aforementioned outcomes are inevitable. Sensible macroeconomic management and good governance are crucial elements in this regard. Openness to trade is also likely to play a key role.</p>
Conclusions / Recommendations	-

Title of the publication	<p>Gyimah-Brempong, Kwabena (2011) Education and Economic Development in Africa. In: African Development Review, 23:2, 219-236.</p>
Research contents Design Method	<p>Quantitative study on the relationship between education and growth, health, political stability and the participation of women in politics in Africa, disaggregated by levels of education.</p> <p>Methodological constraints: Because the study period is relatively short (1960-2010), the generalisability of the results is not guaranteed. The data does not allow for an investigation to be carried out regarding the effects of education on two important development factors, namely poverty and equality. Neither can the quality of education (instead of educational attainment) be used. Nor is it possible to account for the employment of educated people; this would be important since underemployment and employment in non-productive activities, as well as the migration of highlyeducated people, can lead to negative development outcomes.</p>
Findings	<p>There is a positive relationship between education and all of the aspects examined which are relevant to development, although the effects of education vary depending on the level of education in question. All levels of education have positive effects on growth although the effect of tertiary education is the greatest.</p> <p>Primary and secondary education have positive impacts on aspects of preventive health, especially infant mortality and immunisation rates. Curative health aspects, such as the cure rate of tuberculosis, are correlated more strongly with higher education.</p> <p>A positive relationship exists between education and women's political participation, which is also strongest for tertiary education.</p> <p>Political stability and conflict prevention are also correlated with higher education, but such a relationship cannot be demonstrated for primary and secondary education.</p>
Conclusions / Recommendations	<p>At research level, it is recommended that studies on the effects of education be disaggregated by levels of education.</p> <p>At policy level, an overall increase in educational investment is recommended. Depending on priorities, greater investment in particular levels of education should be made.</p>

Title of the publication	Choi, Sang-Duk (2010) Lessons from Economic Growth and Human Capital Formation Policies in South Korea. Korean Education Development Institute: Seoul. ¹⁶
Research contents Design Method	Study on the relationship between education policy and economic growth in South Korea.
Findings	The study divides the stages of education policy and corresponding economic policies as follows: 1) 1945-60: Building of a basic education system and training of a broad base of low-wage earners during the early stages of industrialisation; 2) 1960s-1970s: Quantitative expansion of secondary education based on the large demand for manpower with a low to medium level of training during the period of state-driven, export-led industrialisation. A state-driven system of human capital formation was set up in order to measure the demand for human resources; 3) 1980s-1990s: Expansion of tertiary education based on growing social (pressure from secondary education graduates) and economic (technology-intensive industry) demand. The need for reform leads to the end of the state-driven system of human capital formation; 4) 1990s-present day: Universalisation of tertiary education and lifelong learning. Transition from state-driven development plans to an innovation-led system of human capital formation.
Conclusions / Recommendations	The study makes the following recommendations for developing countries: effective implementation of education policies (broad-ranging basic education, balance between equality and diversity in education, safeguarding a stable education budget, guaranteeing the quality of public education so as to broaden the positive public attitude towards education); coherent linking of the education system with the economy (creation of a system of government-led human capital formation which is linked to the economy, ongoing quality assessment and expansion of education in line with economic demand); linking of education, employment and welfare (creation of a virtuous circle of education, growth and social integration, partnerships between civil society, government, industry, higher education and lifelong learning in an effort to continuously improve employment opportunities).

Economy – Poverty Reduction

Title of the publication	Colclough, Christopher (2012) Education outcomes reassessed. In: Colclough, Christopher (ed.): Education Outcomes and Poverty. A reassessment. Routledge: Abingdon, 154-170. ¹⁷
Research contents Design Method	Synthesis report on the overall outcomes of RECOUP studies on the relationships between education and poverty in India, Pakistan, Ghana and Kenya.
Findings	Poverty reduction According to a quantitative study carried out on China, returns to education for poor population groups are much lower than those for the middle or upper classes. Returns to education also rise in line with the level of education which is why a small number of years of education often result in barely any private benefits. A qualitative study on vocational training has revealed that this alone does not help in escaping poverty.

¹⁶ Since this publication is not a study of effects and is not comparative in nature, it was not included in the quantitative analysis.

¹⁷ The outcomes (both of individual studies and syntheses) of the RECOUP project are either published as RECOUP Working Papers, as contributions to the special issue of Comparative Education, 48:2, 2012 or as contributions to the monograph Colclough, Christopher (ed.) (2012): Education Outcomes and Poverty. A reassessment. Routledge: Abingdon. The contribution discussed here summarises the outcomes in their entirety.

Findings	<p>Health and fertility At micro level, particular mechanisms (such as the influence of the family, social norms) which can either minimise or cancel out the potentially positive impact of education are often evident. The ways in which education impacts behaviour are complex, which is why relationships at the macro level are not always borne out at micro level.</p> <p>Gender and citizenship A qualitative study on the ways in which education impacts young people, their gender relations and the approach to citizenship points to a change both in gender relationships and the traditional division of labour as a result of education. In the case of people who have dropped out of school, however, the study notes that girls continue in their traditional roles. A positive relationship can be identified between education and civic awareness.</p> <p>Inclusion Qualitative studies on the relationship between education and an improvement in the lives of disabled people conclude that education does not bring about the anticipated economic and social improvements. This appears to be due to the specifically low quality of educational opportunities made available to disabled people from poor backgrounds.</p>
Conclusions / Recommendations	Investments in education prove to be an important measure for reducing poverty.

Title of the publication	<p>Bonal, Xavier (2007) On global absences: Reflections on the failings in the education and poverty relationship in Latin America. In: International Journal of Educational Development, 27, 86-100.</p>
Research contents Design Method	Wissenschaftlicher Artikel auf Basis der Befunde eines Forschungsprojektes über Globalisierung, Ungleichheit und Bildungspolitiken in Argentinien, Brasilien und Chile.
Findings	<p>The assumption by international organisations and national governments in Latin America that there is a positive direct relationship between education and poverty has not been proven due to the fact that poverty indicators had barely changed at the end of the 1990s.</p> <p>The global expansion of educational systems and the effects of globalisation on traditional national relationships between education structures and employment are resulting in a trend towards the devaluation of educational qualifications in the labour market, although highly qualified workers are able to protect the value of their qualifications more easily. The effects of globalisation are shown to be varied and contrary to one another. On the one hand, the increase in the size of the group with higher education and higher earnings also increases inequality (composition effect). On the other hand, the greater supply of educated labour reduces inequality (wage compression effect). Both processes have taken place in Latin America throughout the 1990s. First, the size of the population group with higher education increased (as reflected in an increase in the private rates of return for higher education and a decline for primary education). Second, an increase in the general level of education is reducing income inequality. However, the first effect appears to be greater than the second given the persistently high rates of poverty and inequality. As a result, the expansion of education in Latin America in the 1990s has not led to a reduction in poverty and inequality.</p> <p>The assumption of a direct relationship between education and poverty reduction overlooks two factors: 1) Private returns to education require increasingly higher levels of education and, as a result, greater investment. For poor sections of the population, making this investment will therefore become more difficult. 2) The trend towards the devaluation of educational qualifications leads to the creation of a set of selection strategies aimed at distinguishing the middle classes from poor sections of the population, particularly on the basis of educational quality (higher value placed on private education than on education from public institutions) and the remodelling of different forms of social and cultural capital (e.g. certain conceptions of the aesthetics or taste). Consequently, enabling the poor to participate in education is not enough to reduce inequality.</p>

Findings	<p>Studies of education programmes aimed specifically at reducing poverty (e.g. <i>Bolsa Escola</i> in Brazil) reveal contradictory findings. The relatively small amount of funds at their disposal and their limited range are considered to be problems (although these factors are inherent in targeting programmes). The programmes often provide low quality education which means that the cycle of poverty may therefore continue over several generations. Although there are positive effects in terms of social cohesion, negative effects, such as the stigmatising of those who benefit from social aid policies, also exist. Selecting those entitled to participate in such programmes leads to mutual monitoring and weakens bonds of solidarity that have grown in a community. If participation in education is not linked to measures to improve the quality of education, the social polarisation of the education system will increase.</p>
Conclusions / Recommendations	<p>For the purposes of reducing poverty, investments need to be made in education. However, such investment should be preceded by analyses of the specific conditions under which participation in education by poor sections of the population actually enables poverty to be overcome. It is not enough to start from the assumption that there are causal mechanisms based on statistical correlations.</p> <p>Targeted education strategies for the poor should consider the latter's material conditions and how this affects their chances of taking advantage of educational opportunities.</p> <p>The traditional assumption of a direct causal relationship between education and social cohesion should be questioned. Inverse causal mechanisms may also become apparent, such as the fact that socially cohesive societies are conducive to broad participation in education. Strategies designed to reduce social (but also material) inequality are therefore needed in order to prevent educational structures becoming a tool for social differentiation.</p> <p>The notion of educability as a set of material, social, cultural and emotional conditions that are required in order to facilitate learning should be taken into account more. Educability can help in providing an understanding as to why the poor are often unable to take advantage of educational opportunities.</p>

Wirtschaft – allgemein

Title of the publication	<p>Cameron, John / Cameron, Stuart (2005) The economic benefits of increased literacy. Background paper prepared for the Education for All Global Monitoring Report 2006 „Literacy for Life“.</p>
Research contents Design Method	<p>Literature review on the economic benefits of literacy programmes for adults and young people. This report examines relevant literature from three areas: studies based on the livelihood approach, macroeconomic studies and the microeconomic calculation of rates of return as well as studies based on the capabilities approach.</p> <p>Conceptual notes and methodological constraints: First, the studies examined focus less on literacy than they do on formal education. As a result, the findings cannot be directly applied to literacy. Second, most of the studies only look at one of the ways in which literacy could enhance livelihoods, namely increases in the productivity of the individual.</p> <p>The report as a whole is based on an understanding of literacy which regards it as a complex phenomenon which is embedded in the respective social contexts. This stands in contrast to a functionalist perspective of literacy.</p>
Findings	<p>The livelihood approach can be used to calculate a range of (potential) returns to literacy programmes which go beyond purely financial returns (for example, improved access to financial instruments such as loans, improved knowledge of rights of use, greater safety when dealing with technical equipment, etc.).</p>

Findings	<p>The macroeconomic literature, however, reveals a contradictory picture of returns to education (barely any data on literacy is collected). Moreover, the main indicator of economic benefits at national level is the growth rate, which disregards the factors of inequality and poverty distribution. There is barely any literature on these latter aspects. The few studies that do exist suggest that inequality in the distribution of income is associated with inequality in education. Furthermore, they suggest that investments in literacy can help to reduce disparities both in education and income since they are geared towards the less educated classes.</p> <p>Microeconomic findings note a positive relationship between education (here too, studies focusing on literacy are very rare) and private returns.</p> <p>The capabilities approach of A. Sen, with its three-dimensions of entitlements, capabilities and functionings, is similar to the livelihood approach in that it potentially offers ways of highlighting dimensions and mechanisms, beyond purely financial returns, through which literacy can contribute towards the (economic) wellbeing of those affected.</p> <p>The data available for the first two approaches examined is poor. No sets of data exist for the capabilities approach.</p>
Conclusions / Recommendations	<p>An improvement of the systems for monitoring and evaluating literacy measures is recommended, together with increased empirical research based on the livelihood and capabilities approaches.</p>

Title of the publication	<p>Adams, Arvil A. (2007) The Role of Youth Skills Development in the Transition to Work: A Global Review. The World Bank: Washington D.C.</p>
Research contents Design Method	<p>Literature review (empirical case studies and evaluations) on the transition from school to the world of work.</p>
Findings	<p>Although formal technical and vocational education and training (TVET) can make the transition to the world of work easier, this is subject to certain conditions such as the networking of schools and enterprises. It is rather unlikely that TVET on its own can cover the needs of disadvantaged young people. In cases where there is corresponding economic demand, good quality TVET with strong links to enterprises can bring about improvements for young people, albeit not primarily through greater earnings but instead by providing rapid access to the labour market. The effects of continuing and advanced training are also reflected in income.</p>
Conclusions / Recommendations	<p>–</p>

Human Development – Social Benefits

Title of the publication	<p>Green, Andy / Preston, John / Sabates, Ricardo (2003) Education, equity and social cohesion: a distributional model. Wider Benefits of Learning Research Report No. 7. Institute of Education: London.</p>
Research contents Design Method	<p>Comparative quantitative examination which, as opposed to current studies at macro level, wishes to test an alternative model of correlations between education and social cohesion. The hypotheses are based on theoretical assumptions.</p> <p>Data on 15 OECD countries and taken from the World Values Survey (WVS) and the International Adult Literacy Survey (IALS) is used. The results do not apply (directly) to developing or transition countries.</p>
Research contents Design Method	<p>Conceptual information and methodological constraints: The study is based on a relational understanding of education. The relationships examined are consequently assumed to be context-bound, i.e. specific to historical times and places. Any acceptance of universal statements based on examinations with context-bound data should be treated with scepticism.</p>

Findings	<p>There is a negative and significant relationship between educational inequality and social cohesion as well as a negative relationship between income equality and social cohesion.</p> <p>Irrespective of the relationship through income equality, there is also a relationship between educational inequality and social cohesion.</p> <p>The authors cannot find any significant correlation between levels of education and social cohesion which may be due to the fact that institutional and cultural factors outweigh education effects. Another explanation would be that the passing on of (difficult to measure) values, practices and norms through teaching (socialisation) is more responsible for social cohesion effects than the number of people leaving school with qualifications or the number of years of schooling.</p> <p>Inequality of education, which is directly linked to income inequality, appears to have a significant effect on social cohesion. However, causality may also run in the opposite direction: social cohesion and flat income hierarchies reduce inequality in educational outcomes.</p>
Conclusions / Recommendations	<p>In order to strengthen social cohesion, it is highly likely that targeted strategies for reducing social and educational inequality are required, not just within communities but also at societal level.</p> <p>More qualitative research regarding the relationship between educational inequality, income inequality and social cohesion is required. In the absence of qualitative research, many correlations cannot be interpreted nor causalities explained as the quantitative research takes too little account of institutional, but above all cultural factors. Yet it is precisely these factors which greatly influence the effect of education.</p>

Title of the publication	<p>Robinson-Pant, Anna (2005) The social benefits of literacy. Background paper prepared for the Education for All Global Monitoring Report 2006 „Literacy for Life“.</p>
Research contents Design Method	<p>Literature review on the social effects of literacy programmes on adults and young people.</p> <p>Conceptual information: The author refers to what she believes are problematic assumptions in the academic literature. These include the failure not only to distinguish between schooling, education, literacy and knowledge, but also to disaggregate youth from adult literacy. A functional and technical vision of literacy is also applied which postulates the universal benefits of literacy, regardless of context. The focus on women as a homogenous group, with social, ethnic and religious differences being overlooked, is also a problem.</p>
Findings	<p>Health</p> <p>The literature reviewed establishes a relationship between literacy programmes and an improvement in health indicators. The relationship between knowledge, attitudes and practices is considered to be key to the way in which education affects family planning and behaviour towards preventive health, although only a very limited amount of research has been carried out to date into specific effect mechanisms. It is assumed that behaviour change is more dependent on changing values and attitudes than on learning new knowledge. However, the effects of female empowerment which are noted in this connection must be set against the evidence establishing high social capital and effective day-to-day strategies in relation to health among non-literate women as well.</p> <p>Children's education</p> <p>The literature reviewed shows a positive relationship between a mother's degree of education (including participation in literacy programmes) and the likelihood that her children will attend school. This may be due more to the possibility they have of offering their children the relevant support than to the attitudes of the parents themselves.</p>

Findings	<p>Gender equality</p> <p>The study establishes a relationship between women gaining more access to male domains (in the world of work, in learning languages of 'power', etc.) and their participation in literacy programmes. However, this varies depending on context and the kind of decisions involved (e.g. change in the authority to make decisions regarding whether children should attend school, but not in relation to family planning). Literacy programmes can provide a bridge to the formal education system (general or vocational education) for women who were prevented from attending school as children. However, they often encounter the same barriers to attending school as during childhood, namely high costs and social rejection. The study also addresses women's increased confidence and self-esteem as well as the difficulties they face in actually changing gender power relations in the home.</p> <p>The literature on gender equality and health suggests that the type of changes noted do not come about through the passing on of specific knowledge (via a curriculum) but instead through literacy programmes acting as a social space and where specific skills (reading, writing and using a different type of language) can be learned. The non-inclusion of men in literacy programmes limits the far-reaching changes that can be made to existing gender relations.</p>
Conclusions / Recommendations	<p>The social benefits of literacy programmes can be enhanced when they are accompanied by measures such as credit facilities, vocational education measures and access to healthcare and family planning facilities. Overall, integrated programmes are found to have greater effect.</p> <p>The difficulties faced by women in adopting the new social practices that they have learned, particularly with regard to family planning, suggest the need for holistic approaches under which men in particular should be included in the programmes.</p> <p>Curricula that have been developed based on an in-depth understanding of the local context and, in particular, of existing gender relations, are more likely to be able to change traditional ideas and practices than are courses of instruction distributed nationwide. This is dependent on well-trained teachers.</p>
Title of the publication	<p>Patel, Ila (2005) The human benefits of literacy. Background paper prepared for the Education for All Global Monitoring Report 2006 „Literacy for Life“.</p>
Research contents Design Method	<p>Literature review of the effects of literacy programmes on the (human) development of adults and young people.</p> <p>Conceptual information: The study is based on the assumption that literacy is a socially constructed phenomenon. However, underlying the academic and policy-related dominant perspective on literacy is a decontextualised notion. Under this notion, literacy contributes to the development of those cognitive skills which are required for complex thinking.</p>
Findings	<p>Development of cognitive skills</p> <p>The study produces no clear findings. In a number of studies, literacy programmes are shown to improve learners' understanding of decontextualised information in the media, which in turn strengthens the social capital of participants. Other studies point to literacy having no direct effect on mental ability. Improved cognitive skills are more likely to be due to schooling socialisation. From this perspective, the effects of literacy processes on cognitive skills are a result of complex processes and practices within a community. Even illiterates who are included in the literature practices of the community benefit from the associated change processes. It must not therefore be assumed that literacy alone has positive effects. Instead, such consequences are mediated by community practices and the way in which the community is organised.</p>

Findings	<p>Empowerment</p> <p>Although empowerment is not a specific objective of most of the literacy programmes, it is regarded as being an important outcome of them. However, only a few studies systematically examine how literacy can bring about empowerment. The overall assumption is that literacy programmes alone cannot overcome the structural constraints faced by women in their communities, nor guarantee participation. Neither can it be claimed that literacy has a linear effect on individual and community empowerment. The effect of literacy measures depends on the community and the power structures in place. For example, one of the studies cited refers to a community in Mali which accepted literacy programmes only as a way of preserving the status quo.</p>
Conclusions / Recommendations	-

Human Development – Culture

Title of the publication	<p>Farah, Iffat (2005) The cultural benefits of literacy. Background paper prepared for the Education for All Global Monitoring Report 2006 „Literacy for Life“.</p>
Research contents Design Method	<p>Literature review on the cultural effects of literacy programmes on adults and young people.</p> <p>Conceptual information: The relationship between literacy and culture is strong but is difficult to measure. Causal relationships can be assumed to work in both directions. One problem is the current focus of empirical studies on women as a group, whereas in order to be able to measure the cultural effects of literacy programmes, the lifestyles of both men and women need to be considered.</p>
Findings	<p>Attitudes</p> <p>One of the results highlighted by many studies is that non-traditional attitudes regarding lifestyles and gender relations are more prevalent among those having participated in the literacy programmes examined than among other members of the community. In statistical terms, however, the relationship is insignificant and there are no visible linear effects. The degree to which attitudes change varies in different areas. For instance, gender relations within the home often remain unchanged. Moreover, attitudinal change is very fragile and requires external support, including once the literacy programmes have finished.</p> <p>Values</p> <p>The most frequently noted benefit of literacy programmes is the improved self-esteem of participants. However, this feeling is closely associated with the value assigned to particular languages and literacies in a given community. For example, in most cases more value is attributed to a European language or a language used in religious contexts than to local languages. The use of minority languages in literacy programmes can strengthen cultural diversity. However, usually a national or international language is associated with better opportunities for moving ahead in society and/or with the possibility to exert a greater influence over decision-making processes. As a result, the immaterial value of these languages rises.</p> <p>Practices</p> <p>There are only a few studies documenting the relationship between literacy programmes and lifestyles. This may be due to the fact that changes in practices occur very slowly and are dependent on many other factors. Evaluation studies report positive influences since literacy makes people more independent. One study reports that literacy has increased the amount of leisure time enjoyed by women. However, this should not be related directly to literacy but instead to the possibilities that literacy brings to move away from farming and to obtain credit. Literacy greatly increases the range of leisure activities, the effects of which may be empowering. Reading and writing help to extend private space and allow people to express themselves emotionally. Through these activities, they may in turn be able to question and renegotiate values and the roles they have been allocated. However, literacy may also preserve existing roles if, for instance, reading skills are used to read literature which perpetuates the roles traditionally attributed to men and women.</p>

Conclusions / Recommendations	The limited evidence available suggests that literacy can bring about change in people's values, roles and practices. Above all, this requires time and favourable interaction with existing cultural norms.
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Human Development – Health

Title of the publication	Baker, David P. / Collings, John M. / Leon, Juan (2008) Risk factor or social vaccine? The historical progression of the role of education in HIV and AIDS infection in Sub-Saharan Africa. In: Prospects, 38, 467-486.
Research contents Design Method	Quantitative study of the changing influence of the formal school system on the HIV infection rate in the sub-Sahara region since the outbreak of the pandemic. The data was taken from 11 national Demographic Health Surveys (2004) in the sub-Sahara region.
Findings	At the start of the HIV/AIDS pandemic, empirical studies identified a positive relationship between the number of completed years of schooling and the HIV infection rate, i.e. that schooling increased the risk of infection (particularly among males). The conclusion reached by the study is that the influence of formal schooling has now changed and it can be said that schooling plays a key role as a preventive factor in respect of HIV/AIDS. The explanation provided by the study for the negative effect of education at the start of the pandemic is that schooling among males brought associations of higher social status, greater income and more mobility. During the early years of the pandemic, these factors increased sexual promiscuity and therefore heightened the risk of HIV infection. Furthermore, HIV in Africa was at the time wrongly understood to be an illness affecting homosexuals, with heterosexual practices therefore regarded as being safe. For a long time, many governments also denied the existence of the disease and did not provide any resources to prevent it. The information currently available suggests that formal education can play a preventive role. The study claims that the key effect education has on health is to develop individual cognitive skills in order to be able to process information so as to think rationally and to make corresponding decisions affecting individual behaviour.
Conclusions / Recommendations	The study recommends making universal education possible in Africa.

Title of the publication	Clarke, David / Aggleton, Peter (2012) Life Skills-Based HIV Education and Education for All. Background paper prepared for the Education for All Global Monitoring Report 2012 „Youth and skills: Putting education to work“.
Research contents Design Method	Literature review on the effectiveness of life skills-based HIV education at schools in developing countries, carried out as part of EFA. Methodological constraints: The authors refer to the unclear definition of life skills. They stress the difficulty in measuring the specific contribution made by life skills-based HIV education towards stabilising the global HIV/AIDS epidemic.
Findings	The coverage of life skills-based HIV education in developing countries generally reveals a positive trend, albeit with sharp regional variations. The greatest efforts to firmly establish life skills-based HIV education have been made in sub-Saharan Africa, whereas the weakest efforts comparatively are reported in Asia. Figures relating to the level of knowledge about HIV/AIDS as provided by the programmes are poor. Low levels of knowledge (less than 50%) among participants are also revealed, irrespective of the region. The knowledge among teachers, on the other hand, is high. This suggests that knowledge is not being taught efficiently in the programmes. Overall, there is little data on the efficiency of the programmes. The biggest impact appears to be in positively influencing knowledge, attitudes and skills. However, the programmes produced barely any consistent effects on sexual behaviour or on the incidence of infection.

Conclusions / Recommendations	<p>The coverage of life skills-based HIV education needs to be such that it is able to benefit all students.</p> <p>More research is required into the specific contribution of life skills programmes and what is needed in order for them to work best.</p>
Title of the publication	<p>UNICEF (2009) Strengthening Health and Family Life Education in the Region. The Implementation, Monitoring, and Evaluation of HFLE in Four CARICOM Countries. UNICEF: Barbados.</p>
Research contents Design Method	<p>Quantitative and qualitative study on the implementation and effectiveness of the Health and Family Life Education (HFLE) programme in schools in four Caribbean countries. The two main themes of the programme are self and interpersonal relationships (which address violence) and sexuality and sexual health (including at HIV/AIDS).</p>
Findings	<p>The evaluation of the process (implementation) showed that HFLE has a positive effect on teaching. In contrast, the impact evaluation did not identify any positive effects of the programme on attitudes, behaviour and skills connected with the above topics. It is assumed that this is mainly linked to the implementation problems (early stages of the programme, frequent teacher changes, limited teaching time for the programme). The problems should not lead to the conclusion that the programme is not worthwhile.</p>
Conclusions / Recommendations	–
Title of the publication	<p>Yankah, Ekua / Aggleton, Peter (2008) Effects and effectiveness of life skills education for HIV prevention in young people. In: AIDS Education and Prevention, 20:6, 465-485.</p>
Research contents Design Method	<p>Literature review on the effectiveness of life skills programmes for HIV/AIDS prevention.</p> <p>Methodological constraints: The authors point out that the specific contribution of life skills interventions is hard to demonstrate since they are not labelled as such in the majority of the studies. Differences between the studies in the methods used, the design and the programme follow-up period mean that it is difficult to interpret outcomes. The narrow focus on behavioural change may be at the loss of documenting other positive impacts (e.g. enhanced communication skills).</p>
Findings	<p>Life skills interventions are shown to have positive effects on knowledge and attitudes among participants. Long-term studies also establish certain effects on behaviour, although the link is weak. The study also reports positive effects on communication skills, risk perception, gender violence and enjoyment of sex. Studies on Africa refer to a delay in sexual debut while studies on Latin America refer to increased contraceptive use (although rarely of condoms). It is also shown that there is no statistically significant relationship between the programmes and the biological outcomes (reduced rate of infection).</p>
Conclusions / Recommendations	<p>Life skills interventions appear to have a significant effect only when they are part of larger-scale preventive measures comprising several components, as well as in combination with other educational approaches. For instance, programmes focusing on overall sexual health are more effective than those which focus on preventing HIV/AIDS. In terms of methodology, it is important to bear in mind participatory approaches, a factor which in turn has implications in terms of training teaching staff. Programmes taught outside the mainstream school (e.g. at youth organisations) appear to be more effective than life skills interventions taught in school.</p>

Title of the publication	Aslam, Monazza / Kingdon, Geeta (2010) Parental Education and Child Health – Understanding the Pathways of Impact in Pakistan. RECOUP Working Paper No. 30.
Research contents Design Method	Quantitative study on the relationship between the level of parental education and child health in Pakistan with regard to the pathways of impact. The study investigates the following hypothetical pathways of impact: the effects of education on household income, access to media, literacy, labour market participation, health knowledge and the extent of maternal empowerment within the home. The data was collected from surveys of households from nine districts in two provinces of Pakistan.
Findings	Contrary to earlier assumptions whereby barely any influence on childhood health is attributed to fathers, the study finds that fathers' education plays an important role in one-off decisions regarding the health of their children, e.g. in the area of immunisation by means of vaccination. As far as day-to-day decisions regarding health are concerned, the involvement of mothers is comparably greater, as reflected in a child's concrete developments (in terms of height and weight). Although there is a strong relationship between the health knowledge and behaviour of parents and the improved health of children, the study nevertheless stresses that this cannot serve as a basis for inferring any causal relationships.
Conclusions / Recommendations	–

Human Development – Early Childhood Development

Title of the publication	Hyde, Karin A.L. (2008) Investing in Early Childhood Development: Benefits, Savings and Financing Options. ADEA Working Group on Early Childhood Development.
Research contents Design Method	Literature review of the benefits of early childhood development (ECD) and of options for financing ECD in Africa.
Findings	Cost benefit analyses of ECD programmes show that good quality programmes can cut costs of education by reducing school dropout and repetition rates. Another outcome of such programmes is the long-term health and welfare benefits that they have through their positive influence on participants' health-seeking choices. The findings of experimental and quasi-experimental studies show that ECD improves school performance among the participants and facilitates the transition to adulthood by way of a more healthconscious behaviour. The effects are multigenerational since the parents of the children in question have more opportunity to pursue income-generating activities or further education. In turn, the participants' own children also benefit through the more favourable environment in which they grow up. These effects are strongest for disadvantaged children.
Conclusions / Recommendations	The policy recommendation for Africa is to massively expand the coverage of ECD programmes and to include ECD separately in the national budget and corresponding planning process. The outstanding questions in connection with the recommended increase in provision (authority of respective ministries, curriculum, method of provision, staff training, etc.) mean that ongoing research as well as monitoring and evaluation are necessary. The strengthening of the state's role as guarantor of children's rights is also recommended as is raising awareness of ECD among the public and the relevant actors (in a similar way to the EFA and MDG campaigns), focusing on disadvantaged population groups, and making parents and communities the most important partners (which implies taking account of local traditions and strengthening community structures).

Title of the publication	Schady, Norbert (2006) Early Childhood Development in Latin America and the Caribbean. World Bank Policy Research Working Paper 3869.
Research contents Design Method	Literature review on deficits in early childhood development of children in Latin America as well as a synthesis report on the impact of selected early childhood development programmes in Latin America. Methodological constraints: The author stresses that the small number of programmes studied means that any conclusions drawn must be regarded as tentative only.
Findings	<i>Oportunidades</i> programme (Mexico): The findings reveal slight improvements in motor skills as well as a greater likelihood to enter school earlier and attend for a longer period for those children having participated in the cash transfer programme. Day care and pre-school programmes (Bolivia and Argentina): The findings reveal positive impacts not only on motor skills, psychosocial skills and language acquisition (especially for children who are older than 37 months) but also on learning outcomes and noncognitive skills (e.g. attention and discipline). Nutritional and stimulation programmes (Jamaica): The most sustainable effects on learning outcomes and physical development were achieved using a combination of nutritional and stimulation programmes. The programme focusing on nutrition, on the other hand, did not on its own bring about any sustainable improvements.
Conclusions / Recommendations	Taken on their own, cash transfer programmes do not seem to have any far-reaching potential to change early childhood development. It may be necessary to combine these with other interventions. In contrast, day care and pre-school programmes appear to be very efficient. Nutritional programmes alone – especially where they do not begin during a mother’s pregnancy and continue through the first three years of the child’s life – seem unable to offset early childhood deficits on a sustainable basis. Programmes combining components of nutrition (in most cases supplying the participating families with nutritional supplements) with stimulation (for instance regular home visits by social workers, including parent counselling) tend to be more efficient.
Title of the publication	King, Elizabeth M. et al (2006) Early Childhood Development through an Integrated Program: Evidence from the Philippines. World Bank Policy Research Working Paper 3922.
Research contents Design Method	Quantitative study on the effects of an integrated government programme for early childhood development in the Philippines. Examination carried out over three years using data on 6,693 children aged 0-4 in two ‘treatment’ regions and one ‘control’ region.
Findings	The programme consists of infant feeding programmes, workshops for parents, day care both within and outside of the family as well as the upgrading of existing health facilities. The programme is deemed to have a positive impact on the cognitive, social, motor and language development of children as well as on their shortterm nutritional status. The effect of the programme appears to increase in line with the duration of programme exposure, especially where this is longer than 12 months. The positive effects also appear to depend on the age of the child and are greatest for children under four years of age.
Conclusions / Recommendations	–

Human Development – Nutrition	
Title of the publication	Mukudi, E. (2003) Education and nutrition linkages in Africa: evidence from national level analysis. In: International Journal of Educational Development, 23, 245-256.
Research contents Design Method	Quantitative study on the links between education and nutritional well-being in 52 African countries.
Findings	Education has a direct positive link to body size and weight and an indirect link to improved longer-term nutrition. The education of women has a direct positive effect on (children's) food intake. A further key factor in connection with nutritional well-being is household size, with education also having indirect positive effects (smaller households) in this regard through higher incomes and women waiting longer to have children.
Conclusions / Recommendations	Although educating women and girls is a key factor in the fight against malnutrition, it should not be to the detriment of boys' education.
Title of the publication	Bhutta, Zulfiqar A. / Imdad, Aamer / Yakkob, Mohammad Yawar (2011) Impact of maternal education about complementary feeding and provision of complementary foods on child growth in developing countries. In: BMC Public Health, 11:Suppl 3, S25.
Research contents Design Method	Literature review on the impacts of nutritional and combined nutritional/ educational programmes on the body size and weight of children between 6 and 24 months. Meta-analysis of 17 studies.
Findings	Both interventions reveal a positive relationship, with improved indicators for the body size and weight of the children studied. Specific educational interventions for maternal nutrition leads to improvements in their nutritional practices and also shows improved indicators for the body size and weight of the children studied.
Conclusions / Recommendations	In consideration of numerous risk factors, integrated measures (food provision and educational measures) are recommended in order to prevent nutrition-related growth disorders in developing countries.
Governance – Democratic Development	
Title of the publication	Evans, Geoffrey / Rose, Pauline (2012) Understanding Education's Influence on Support for Democracy. In: Journal of Development Studies, 4:4, 498-515.
Research contents Design Method	Quantitative study on the importance of education in the development of democracy in 18 African countries. The data was taken from the third Afrobarometer survey.
Findings	Education is by far the strongest social factor explaining democratic attitudes, with its effects increasing in a linear form as levels of education attained increase. Other factors which play a role in terms of democratic attitudes have less of an effect than education. These are gender (women are less pro-democratic in their attitudes than men) and youth (young people are less pro-democratic in their attitudes than adults). The study shows that the correlation between education and democratic attitudes is statistically strong. It also provides evidence of the mechanisms through which education has an impact – not via socio-economic status or the income gap linked to education but instead via cognitive and emotional (motivational) development through education.

Conclusions / Recommendations	In the context of developing democracy, the provision of formal education, particularly at primary-school level, should be seen as a key tool of national governments and donors.
Title of the publication	Mattes, Robert / Mughogho, Dungalira (2009) The limited impacts of formal education on democratic citizenship in Africa. Centre for Social Science Research Working Paper No. 255.
Research contents Design Method	Quantitative study on the relationship between formal education and democratic development in Africa. The following correlations are addressed: between formal education and 1) political participation; 2) the ability to formulate political opinions; 3) basic democratic values; 4) the willingness to critically evaluate political actions. The data was taken from the Afrobarometer survey.
Findings	Higher levels of education encourage people to engage more often with the media and obtain political information. Higher levels of education help improve people's cognitive skills. People with higher-level qualifications therefore tend to be more capable of formulating political preferences and opinions and evaluating political and economic performance. More educated people are more likely to offer critical opinions and call more strongly for democracy than people with little education. However, there is no indication that people with secondary or postsecondary qualifications form democratic ideas more often than people with low-level qualifications. Education plays only a very small role in political participation. In statistical terms, higher education has barely any influence on improving basic attitudes to democracy. Graduates of higher education institutes are more likely to offer critical assessments, although they are only slightly more critical than other sections of the population.
Conclusions / Recommendations	The discovery that higher education is of little relevance to democratic development is unexpected, meaning that more research into this issue is recommended.
Title of the publication	Stromquist, Nelly P. (2005) The political benefits of adult literacy. Background paper prepared for the Education for All Global Monitoring Report 2006 „Literacy for Life“.
Research contents Design Method	Literature review on the political benefits of adult and youth literacy.
Findings	There are only a very small number of studies on this issue. The few empirical findings available indicate a relationship between participation in literacy programmes and a greater interest in national and community activities. However, there is no discernible linear relationship between literacy programmes and political participation. The most significant finding from many evaluations of literacy programmes is that they boost participants' self-confidence, even though this is virtually never their set objective.
Conclusions / Recommendations	Boosting the self-confidence of participants in literacy programmes should be consciously promoted. In addition, the teaching of (professional) skills and know-how should be more strongly incorporated into the programmes so that they ultimately provide a basic education for adults rather than simply teaching literacy.

Governance – Conflict Prevention	
Title of the publication	Østby, Gudrun / Urdal, Henrik (2010) Education and Civil Conflict. A Review of the quantitative, empirical literature. Background paper prepared for the Education for All Global Monitoring Report 2001 „The hidden crisis: Armed conflict and education”.
Research contents Design Method	Literature review (around 30 quantitative and a few qualitative case studies) on education and political violence, focusing on internal conflicts.
Findings	<p>The findings of the quantitative studies suggest that more education at all levels reduces most forms of political violence, although some micro-level findings indicate that more highly educated individuals are overrepresented among the specific group of ‘terrorists’.</p> <p>In particular, secondary male education appears to play the most important role. Micro-level studies state that multiple theoretical frameworks need to be developed in order to understand how insurgents/ combatants come to be recruited. According to these studies, there seems to be something to be said against simplistic assumptions along the lines of ‘The poorer people are and the less educated they are, the more readily they will rebel against the status quo’. A link is made between poverty and low schooling on the one hand and the recruitment both of insurgents and counterinsurgents on the other.</p> <p>In the past, rapid expansion in tertiary education was often associated with the risk of recruitment to terrorist organisations. In general, growth of this kind does not appear to pose a threat to peace, although this conclusion is based on only a very small number of studies.</p> <p>There is little evidence that inequality in education has an influence at individual level. However, the risk of conflict increases sharply whenever this inequality overlaps with other forms of exclusion, particularly in terms of ethnicity, religion, gender or regional exclusion.</p> <p>There has been little research into the relationship between conflict and educational quality and there is also no meaningful body of evidence for the link between conflict and curricula. Research is also hindered by the quality of available data.</p>
Conclusions / Recommendations	<p>Despite frequently expressed fears of a link between expansion of education and terrorism, the expansion of education should continue (that some terrorists are well educated appears to be due to selection effects). However, there has been little empirical research done on the consequences for the risk of conflicts of educational expansion and labour market dynamics. In addition, educational expansion seems to have more of a stabilising effect in democracies than in non-democracies/other forms of government.</p> <p>Inequalities in education should be reduced, particularly those affecting people’s access to education.</p>
Title of the publication	Seitz, Klaus (2004) Bildung und Konflikt. Die Rolle von Bildung bei der Entstehung, Prävention und Bewältigung gesellschaftlicher Krisen – Konsequenzen für die Entwicklungszusammenarbeit. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ): Eschborn.
Research contents Design Method	Literature study on the relationship between education and conflict and its consequences for DC.
Findings	The assumption that education essentially promotes peace cannot be validated. The formal education system can actually aggravate conflicts, especially when it engenders or perpetuates socioeconomic disparities, creates social exclusion and teaches intolerance. On the other hand, it can be assumed that education systems do promote peace when they are designed to be as inclusive and holistic as possible, embrace a democratic and participatory learning culture and both practice and preach a constructive attitude towards heterogeneity.

Conclusions / Recommendations	The following recommendations are made: creating networks for research, data acquisition and planning in the field of 'education and conflict management'; making educational establishments more resistant to crises; developing strategies for appropriate educational intervention in crisis situations; establishing criteria for conflict-sensitive education systems; harnessing strategies from peace education for educational intervention to prevent crises; and developing tools for the education sector for analysing conflicts and their impact.
Title of the publication	Thyne, Clayton (2006) ABC's, 123's and the Golden Rule: The Pacifying Effect of Education on Civil War, 1980-1999. In: International Studies Quarterly, 50, 733-754.¹⁸
Research contents Design Method	Quantitative study testing two hypotheses on the relationship between education and conflict: (a) that public investment in education sends a strong signal to the people that their livelihood could potentially be improved, thus making them less inclined to provoke conflict; and (b) that education can generate economic, social and political stability, show the people ways of resolving conflicts peacefully and thus reduce the likelihood of conflicts arising. These hypotheses are based on the period from 1980 to 1999 using data from 160 countries by examining the effects of educational expenditure, enrolment levels and literacy on the probability of civil war.
Findings	On hypothesis (a): government spending in education decreases the probability of civil war, particularly if investment is distributed equitably. The availability of healthcare facilities magnifies the effect. On hypothesis (b): secondary education, particularly for young men, and rising literacy rates reduce the probability of civil war. Secondary education for young men increases the opportunity costs for rebel movements. In addition, education brings the possibility of resolving conflicts by peaceful means closer to the population. Postsecondary education does not provide any additional evidence for this relationship.
Conclusions / Recommendations	While other factors related to conflicts, such as per capita income or mountainous terrain, are difficult to change, education is an area that can be changed relatively quickly with investment and policy advice. Countries at risk should therefore be supported with education aid, with secondary education for young men regarded as being particularly effective in helping to ease conflicts.

Gender

Title of the publication	Unterhalter, Elaine et al (2010) Girls, gender and intersecting inequalities in education: A reflection from case studies in South Africa and Kenya. Paper presented at the UNGEI-Conference „Engendering Empowerment: Equality and Education” Dakar, Senegal, 17-20 May 2010.
Research contents Design Method	Qualitative study by a multinational research team on implementing strategies targeting gender, education and poverty reduction in Kenya and South Africa. Ten case studies at the level of the ministry for education, the provincial administration, schools and international and national non-governmental organisations (NGOs). Conceptual information: The study is based on a multidimensional concept of poverty, gender and education, with the idea of intersectionality playing a key role. The study presents three ways in which the relationship between poverty, gender and education can be understood: as a 'line' (descriptive understanding based on statistical indicators such as poverty rates and participation rates in education), as a 'net' (gender as a characteristic of power relationships at household, community and national level) and as a 'fuel' (gender relationships are altered or entrenched through human actions).

¹⁸ This study is one of the publications reviewed in Østby/Urdal (2010).

Findings	<p>It is hard for government officials, teachers and NGO workers to link poverty and gender together. There is no notion of intersectionality.</p> <p>Teachers and school committees perpetuate gender stereotypes. All too often, NGOs are too far removed from national government policy – or fail to reflect the relationship between gender hierarchies and poverty. Departments and individuals tasked specifically with questions of poverty often ignore gender as they assume poverty is gender neutral.</p> <p>The prevailing understanding of the relationship between poverty, gender and education is that of the ‘line’, as it is centred around the measurability of gender equality, i.e. in the form of participation rates in education. The goal is a gender balance, i.e. the equal participation of men and women. This is detrimental to the understanding of gender as a relational phenomenon and of the ways in which inequalities might intersect. As a result, schools play host to some extremely stereotyped concepts of gender and poverty and, in actual fact, perpetuate gender inequalities rather than redress them.</p> <p>The focus on gender neutrality or balance becomes a conceptual boundary beyond which it becomes difficult to discuss the complexity of the phenomena. The same is true for the understanding of poverty.</p>
Conclusions / Recommendations	There needs to be a broad understanding of the complex links and interrelationships.

Title of the publication	<p>Robinson-Pant, Anna (2004) Education for women: whose values count? In: Gender and Education, 16:4, 473-489.</p>
Research contents Design Method	<p>Academic article on the relationship between gender and education, based on ethnographic research into women’s literacy programmes in Nepal.</p> <p>Conceptual information: The study criticises the two current conceptual approaches of WID (Women in Development) and GAD (Gender and Development) as they lack any political understanding of gender. They focus on the symptoms rather than the causes of gender inequalities and fail to take local gender structures into account. While diversity is understood in the sense of measures adapted at local level, the dominant concept of gender, i.e. in practical terms Western ideals, is universalised. The lack of an analysis of the gender relationships at work within a society also means that no consideration is made as to what a change in these relationships could signify and what it could bring along with it. With regard to education, girls’ access to a formal school-based education is generally presented as an unquestioned aim; the idea that schools themselves create (or perpetuate) certain relationships between the sexes is not investigated.</p>
Findings	<p>By effectively excluding men from literacy programmes, the teaching of literacy is ‘feminised’, which does not help efforts to change local gender relationships or the gender-specific division of labour.</p> <p>Literacy programmes do not ultimately have the assumed impact. The women involved often question the need to be taught in a school environment (‘Can we not teach ourselves to read and write?’) as well as the development ideology conveyed in the programmes, refusing for instance to take on board the messages about healthcare and fertility that are imparted. Gender relations do not change in line with polarised Western preconceptions but according to local circumstances: customs and rituals are reinterpreted to create new scope.</p> <p>The assumption that education for women has a universal value restricts national governments’ political scope for negotiation with donors regarding what the national and local concepts of gender could be.</p>
Conclusions / Recommendations	<p>Before any intervention under development cooperation is made, research is needed to determine the specific gender relationships and educational processes in the relevant communities, e.g. what the local customs are regarding literacy, how they relate to the formal education system and in what language they are conducted.</p> <p>Any changes, which may already be taking place, should be identified and taken into consideration.</p>

Title of the publication	Andrabi, Tahir / Das, Jishnu / Khwaja, Asim Ijaz (2009) What did you do all day? Maternal Education and Child Outcomes. Policy Research Working Paper 5143. The World Bank: Washington D.C.
Research contents Design Method	Quantitative study on the relationship between mothers' schooling and their children's learning abilities. The study compares mothers with no formal schooling whatsoever (75% of those surveyed) with mothers who had a low level of education.
Findings	<p>Mothers with a certain level of education (1.34 years of schooling on average) spend more time with their children on educational activities than mothers with no education whatsoever. The children concerned performed better in examinations. However, their higher level of education does not give the mothers any greater say within the family regarding educational choices for their children, and their education also does not lead to greater spending on the children. There was therefore no discernible link to school enrolment rates, although this could be due to the quality of the data.</p> <p>The mother's level of education also influences how other members of the household see education. For instance, having a mother with schooling makes it more likely that other members of the household will read to the children or tell them stories.</p> <p>There is also a relationship between the level of education that mothers have received and a beneficial learning environment for their children: mothers with a certain level of education spend more time helping their children with schoolwork than those without any education whatsoever. The time spent on schoolwork by the children themselves is even higher for the first group because educated mothers create the necessary preconditions for the children within the household.</p> <p>No link was established between schooling for women and them being given a greater say in household matters. It can be concluded that the relatively low level of participation in education is not sufficient to translate into an improvement in women's negotiating powers.</p> <p>Even a very low level of schooling for mothers can boost their children's performance. It is evidently not the development of cognitive faculties regarding schooling that is crucial here but rather an understanding of the importance of learning.</p>
Conclusions / Recommendations	–

Title of the publication	Bhatti, Feyza / Jeffrey, Roger (2012) Girls' schooling and transition to marriage and motherhood: exploring the pathways to young women's reproductive agency in Pakistan. In: Comparative Education, 48:2, 149-166.
Research contents Design Method	<p>Combined quantitative and qualitative study as part of the RECOUP project on the influence of schooling on women's power to decide on marriage and motherhood in Pakistan.</p> <p>Survey of households in two Pakistani provinces (approximately 9,000 people surveyed) and qualitative interviews in rural and urban communities, which were also included in the household surveys.</p>
Findings	<p>The quantitative findings reveal that women who have attended school marry later and have a greater likelihood of having a say in their choice of husband. However, a school education is not the most important factor influencing a woman's power to make decisions regarding her marriage. Rather, the main factors are the financial situation of the woman's family and their province of origin. There is a positive link between the number of years of schooling and greater powers to make decisions, which is most evident for women with secondary or post-secondary qualifications.</p> <p>The qualitative findings reveal that women can only make use of their agency within the scope of socially permitted choices. This factor is not reflected in the quantitative study.</p>

Findings	<p>Although all women, regardless of their level of education, submit to their family's decision, the study suggests that there are various levels of submission. Social and family networks essentially appear to be the most important factors influencing decision-making, above the level of education of the woman involved or of her parents.</p> <p>There is no relationship between schooling and when women have their first child. Quite the opposite: women who attended school had their first child earlier after marriage than those who did not. This could be because the former were older when they married (and therefore wanted children sooner) or because they were in better health.</p> <p>In terms of the number of children, there appears to be a strong positive relationship between schooling and the likelihood of a woman's wishes being taken into account. In the matter of contraception, there are several decision-makers, with the mother-in-law playing an important role. It is apparent that religious, cultural and family issues mean more to the women concerned than behaviour and decisions based on knowledge they have been taught (in school). Although women who attended school are more likely to have a say on decisions regarding contraception than those who did not, the decisive factor for both groups is the cultural and social context.</p>
Conclusions / Recommendations	<p>The quantitative analyse shows a strong correlation between schooling and the power to decide on marriage and having children. However, the qualitative analysis shows how complex these decision-making processes are and how the women themselves see family and social norms, rather than their schooling, as a decisive factor.</p> <p>A combination of quantitative and qualitative methods should be used more often in research. There is also a need for more precise study of the impact of participation in education and those aspects of the social and cultural context that can negate or minimise the effects of education.</p>

Title of the publication	<p>Levine, Robert A. et al (2012) Literacy and Mothering. How Women's Schooling Changes the Lives of the World's Children. Oxford University Press: Oxford.</p>
Research contents Design Method	<p>Quantitative and qualitative study carried out over 15 years in Mexico, Venezuela, Zambia and Nepal on the influence and effects of the literacy levels of mothers on the lives of their children.</p>
Findings	<p>There is a direct positive link between the literacy skills of mothers, acquired in school, and the health of their children. The study of its effects reveals that literacy enables the women concerned to understand healthcare-related messages in the print and broadcast media and to make their own statements on illness. In this regard, literacy is seen as having a significant influence on oral communication skills.</p> <p>A relationship is also identified between literacy and a change in attitude towards healthcare (e.g. immunisation). Rather than cognitive skills (critical thinking), for instance, the key factor here is found to be the internalisation in Western-style schools of, on the one hand, the obligation to follow instructions from people in authority (healthcare professionals are obeyed) and, on the other, the adoption of a teacher role in communicating with their own children (pedagogical mothering).</p> <p>In this context, a positive relationship was also identified in Mexico, Venezuela and Nepal between the literacy levels of mothers and the learning outcomes of their children, although there are also other factors in play here.</p>
Conclusions / Recommendations	<p>–</p>

Inclusion	
Title of the publication	Singal, Nidhi / Jain, Aanchal (2012) Repositioning youth with disabilities: focusing on their social and work lives. In: Comparative Education, 48:2, 167-180.
Research contents Design Method	Qualitative study forming part of the RECOUP project on the influence of schooling on the lives of disabled young people from urban and rural areas of Madhya Pradesh (India). Interviews with 30 disabled young people, 15 male and 15 female, with varying levels of education, and their families (particularly mothers).
Findings	The interviewees were largely better educated than their able-bodied siblings, suggesting that disability in itself does not mean exclusion from the education system at household level. Hearing disabilities are an exception. Participation in society Those affected tend not to play an active role in society. Men with over eight years' schooling generally know more about their rights than those with fewer years of schooling. Women know very little about their rights. Employment Irrespective of type of disability and the number of years of schooling, regardless of whether in rural or urban areas, work patterns have a strong gender element: men invariably work outside the house, whereas women work at home. Length of schooling The number of years of schooling has no significant influence on whether the interviewees have a job or work in the home. Socio-cultural factors, particularly gender roles, play more of a decisive role. The interviewees said that their greatest desire was to get a job, or, in the case of women, to be able to leave the house.
Conclusions / Recommendations	–
Title of the publication	Ndinda, Malinda Harrahs (2005) Integrating the Physically Disabled Children into Regular Schools in Kenya. An Analysis of Causes of Marginalization, the Life Situation of the Disabled Children and Proposals for enhancing their Inclusion and Welfare. A Case Study of Machakos District. Dissertation. Universität Osnabrück.
Research contents Design Method	Qualitative study of the causes of marginalisation of physically disabled children in Machakos district (Kenya). Comparison between inclusion-oriented tuition in mainstream schools and special tuition in dedicated schools.
Findings	Physically disabled children in Machakos suffer considerable marginalisation due on the one hand to negative attitudes from their community and on the other to the lack of essential basic health services and infrastructure. It is exactly these reasons that are significantly impeding efforts to bring about inclusive education in Machakos district. As a result, many disabled school-age children do not attend school. The study reveals some positive findings of inclusive education (compared with special tuition in dedicated schools) despite the considerable shortcomings in infrastructure and capacity: improved learning, positive social relationships and attitudes, and the teaching of skills and capabilities that will be required in later life.
Conclusions / Recommendations	–

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