

Chapter 6

Conclusion: policy messages and future agenda

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This chapter presents policy messages derived from this report. Education is not a silver bullet. However, it has a significant potential to promote health and social cohesion by fostering cognitive, social and emotional skills as well as positive attitudes, habits and norms that can help trigger healthy lifestyles and active citizenship. Promoting these competencies is most likely to be fruitful when home and community environments are in line with education-based efforts. This calls for ensuring policy coherence across sectors and stages of education. Early childhood education and care offers particular examples of how integrated and co-ordinated actions can be effectively made and extended to other levels of education. The challenge is no doubt immense, but the returns to well-being and social progress from improving education can be significant.

6.1. Introduction

The idea that education produces social benefits is not new. Early philosophers such as Aristotle and Plato pointed out that education was central to the moral fulfilment of individuals and the well-being of the society in which they live (Barnes, 1982; Hare, 1989). In more recent times, however, education has been increasingly regarded as an investment with economic returns. It was not until the mid-1980s that social scientists started to observe that individuals with higher levels of education tended to live longer, commit less crime and engage more in society than those with lower levels of education. Educated parents were more engaged with their children's school progress than less educated parents, and children who had experienced rich learning environments were more cohesive and less prone to risky behaviour. The idea that education was a key ingredient in generating such benefits began to emerge in the literature (Haveman and Wolfe, 1984).

The previous chapters have synthesised the knowledge base on this issue. The report started by describing the recent emergence of global initiatives to foster well-being and social progress. In doing so, it showed how the OECD's Social Outcomes of Learning (SOL) project related to this trend. The report has also delved into the extensive and fast-growing literature on this topic to examine whether and to what extent education makes a difference in people's health and civic and social engagement, how this can be achieved and under what conditions. At the end of this long journey, this chapter recapitulates the research results by translating evidence into policy messages and presenting a way forward in terms of future research and policy dialogues.

6.2. Policy messages

Policy message 1: Education can improve health and social cohesion by empowering individuals with knowledge, cognitive skills and socio-emotional skills and by instilling positive values, attitudes and norms.

The main conclusion of the OECD's Social Outcomes of Learning (SOL) project is that education matters. It has significant potential to raise the level of an individual's health, civic participation and trust and to foster the collective social cohesion of communities and society at large. The power of education lies in its capacity to improve knowledge, cognitive skills and socio-emotional skills; strengthen attitudes to risk as well as resilience and self-efficacy; and shape values, norms and habits. These competences can be produced and strengthened over the course of a lifetime through various forms of learning – formal, non-formal and informal. In contemporary societies, education is one of the most powerful ways to improve social outcomes and foster social progress.

However, the education system is not necessarily organised to produce these positive outcomes effectively. The relevant policy question, then, is: How can the positive social impact of education be improved and strengthened? The Social Outcomes of Learning (SOL) project shows that it is necessary to look into specific pathways and strategies. There are some very powerful examples of effective educational interventions. For instance, schools have successfully promoted active citizenship using situated learning so that students learn “democracy in action” by engaging directly in local democracy. Schools have also promoted healthy diet and lifestyles by promoting extra-curricular sports activities and improving students’ access to healthier food (e.g. school meals and vending machines).

Policy message 2: Early childhood education and care has significant potential to improve health and civic and social engagement more efficiently

Promoting early childhood education and care has recently gained prominence on the education agenda. Chapter 4 suggests that early childhood education and care can foster the development of cognitive, social and emotional skills that have been shown to raise short-term and long-term health outcomes (Carneiro *et al.*, 2007; Cunha and Heckman, 2008). Chapter 3 points out that these skills also drive civic and political participation. Numerous studies suggest that early development of these skills can make further investment in them more efficient: “Skills beget skills” (Cunha and Heckman, 2008). The family plays an important role in initiating these skills while early childhood education and care and schools (along with further family inputs) can enhance and build on them to improve health and civic outcomes. In sum, starting early appears to promote efficiency in raising social outcomes.

Policy message 3: Compulsory primary and secondary education can do more to promote health and civic and social engagement

The evidence on the contribution of the past decades of expansion in compulsory education to better health and civic and social engagement is mixed. This does not mean that schools play a limited role. Chapters 3 and 4 present studies showing that education can make a difference by raising children’s cognitive skills (*i.e.* literacy, numeracy and higher-order processing) and socio-emotional skills (*i.e.* self-efficacy, self-esteem and social skills), and by developing norms and habits of active participation and healthy lifestyles. However, the effects of schools are found to be modest when the schools only provide abstract information, e.g. through health and citizenship curricula, or when they simply encourage students to eat nutritious food or volunteer. Schools do better when they develop norms of healthy lifestyles and active citizenship and provide an open classroom climate and situational learning (Torney-Purta *et al.*, 2001; Benton *et al.*, 2008;

Trudeau and Shephard, 2008). Students are more likely to learn the values of active citizenship by engaging in real-life projects. They can also learn more about the health benefits of a balanced diet and a healthy lifestyle by eating well-balanced school meals and engaging in extensive extra-curricular physical activities.

Policy message 4: A rise in tertiary attainment may further help to raise the level of health and civic and social engagement

The tertiary education system is expanding in many OECD countries (OECD, 2010). Chapters 3 and 4 suggest that tertiary education is more strongly associated than primary and secondary education with improvements in trust and tolerance and a lessening of obesity, although it is difficult to establish causal links. There is indirect evidence suggesting that tertiary education matters. For instance, a study based on data from the United Kingdom shows that advanced competences – those requiring higher-order abstract thinking – explain a sizeable part of the relationship between education and obesity (Cutler and Lleras-Muney, 2010). Better access to social networks, which tertiary graduates tend to enjoy, has also proved to be an important pathway in terms of the relationship between education and obesity. Moreover, social psychologists suggest that ages 18 to 25 are among the most important years for forming beliefs and values about how a society functions (Krosnick and Alwin, 1989; Giuliano and Splimbergo, 2009). Attending tertiary education during this period may also promote a stronger sense of interpersonal trust and tolerance towards immigrants if individuals learn about the social and economic benefits of living in a socially and culturally diverse community. In sum, the current expansion of tertiary education systems is likely to help improve health and civic and social engagement.

Policy message 5: Education can contribute to reducing inequalities in social outcomes

Significant inequalities in health and civic and social engagement exist across demographic and socioeconomic groups (Verba *et al.*, 1995; CSDH, 2008) and across educational groups as well. The expansion of tertiary attainment may offer an opportunity to reduce inequalities if disadvantaged groups benefit more from increased educational opportunities than those in other groups. Inequalities can also be tackled through direct educational interventions targeted at disadvantaged groups. Targeted interventions designed to raise cognitive, social and emotional skills have been shown to help reduce inequalities.

Inequalities usually appear at the beginning of the life cycle. Since “skills beget skills”, the effectiveness of targeted interventions in reducing inequalities can be enhanced by starting early. For instance, early childhood education and care programmes in the United States have shown positive and sizeable health effects among treated disadvantaged groups.

Policy message 6: Policy coherence across sectors and levels of education raises the effectiveness, efficiency and sustainability of efforts to promote health and civic and social engagement

School-based efforts to foster health and CSE are likely to be more effective when the home and community environments are in line with what children experience at school. Chapter 4 shows that school-based efforts to promote healthy lifestyles and habits are less likely to be effective when children are allowed to engage in sedentary activities at home or to find fast-food restaurants on their way home from school (Gortmaker *et al.*, 1999; Currie *et al.*, 2010). Peer effects also matter. Having friends who engage in risky health behaviour such as under-age drinking and smoking has a negative effect on children's health outcomes (Clark and Loheac, 2007; Lundborg, 2008). This points to the importance of adopting a coherent approach, which can be facilitated by integrated delivery of services. Early childhood education and care programmes in the United States and the United Kingdom provide useful insights into how an integrated approach involving multiple stakeholders can work. However, evaluation studies from the United States suggest that integrated approaches may sometimes yield only short-term benefits to children if the treated children then return to poor quality schools (Currie and Thomas, 2000). This suggests the importance of ensuring policy coherence across levels of education.

It is important to stress that policy coherence is not only about sharing information, although this is an important first step. Coherent policy action often requires significant changes in stakeholder behaviour, and this is a challenge. For example, improving the nutritional content of food served at home requires changes in the way parents prepare food and may also involve an increase in household expenditures. Banning or reducing the number of snacks with high fat and sugar content in school vending machines is likely to be difficult if schools count on the revenue generated from the machines. Even more difficult will be changing school-age children's access to TV advertisements and fast-food restaurants. However, there are other ways to address these problems. For instance, improvements in school meals can be accompanied by parental counselling on home food preparation. Vending machines and fast-food restaurants can introduce healthier options.¹ This may in turn leave much of the challenges to be addressed via children's psychosocial features, such as self-control and self-efficacy, which can be developed through the family and school.

Policy coherence requires governments to promote strong linkages both horizontally (*i.e.* across ministries of education, health, family and welfare), vertically (*i.e.* across central, regional and local levels of government) and dynamically (*i.e.* across different levels of education).² This will be challenging as OECD governments have limited experience in fostering such

linkages. Governments may consider enhancing governance and management structures as well as policy instruments to improve horizontal and vertical collaboration and adopt a “whole of government” approach to social progress.

Policy message 7: Much more can be done to improve health and social cohesion by better mobilising existing educational resources

After recognising the various ways in which education might contribute to improving health and civic and social engagement, it is logical to ask how much extra funding is necessary in order for education to make its contribution to fostering social outcomes. It is important to stress that education will be provided for regardless of any consideration of its effect on health and civic and social engagement. The question is not whether countries need more education to raise social outcomes, but rather how they organise their educational systems so that they also leverage health and civic and social engagement. Certain approaches such as comprehensive early childhood education and care programmes are likely to be resource-intensive, although the long-term returns are likely to be high.³ Raising the quality of the compulsory schooling environment in terms of the norms, ethos and climate that are conducive to healthy lifestyles and active citizenship probably requires far fewer resources. Tertiary education is also an area that only calls for limited additional resources, since the contribution of this level of education to social outcomes is likely to be through its role in fostering higher-order competences and social skills, as well as through its contribution to creating social networks.

A further concern might involve the extra time needed to improve healthy lifestyles in school, which might affect the amount of time spent on academic subjects. Chapter 4 suggests that up to an hour of physical activity can be added to a school curriculum by taking time from other subjects without compromising students’ academic outcomes (Trudeau and Shephard, 2008).

Policy message 8: Education is not a silver bullet for tackling challenges relating to health and civic and social engagement but its net impact is likely to be high after externalities are taken into account

Education is not likely to be the solution to the diverse challenges regarding health and civic and social engagement in OECD countries. Nonetheless, this report suggests that the impact of education on health and civic and social engagement can be significant when the diverse externalities it may promote are taken into account. Educated parents have been shown to raise not only the cognitive and non-cognitive skills of their children, but also their early life health circumstances (Currie and Moretti, 2002; Carneiro *et al.*,

2007; Cunha and Heckman, 2008). A more educated wife has been shown to be associated with a reduced risk of the husband's death or coronary heart disease (Bosma *et al.*, 1994). The presence of a large number of educated people has been shown to be associated with a higher level of trust and tolerance in the community (OECD, 2010). Considering all these externalities, the productive value of education can be considered more significant than what is usually in the minds of policy makers.

6.3. Implications for research

Working towards a coherent framework for evaluating the social outcomes of learning

Major progress has been made in the area of social outcomes of learning on both the theoretical and empirical fronts. The work has generally been undertaken independently by researchers across a range of disciplines: education, economics, public health, epidemiology, political science, sociology and psychology. The challenge for the SOL project was to locate and exploit the vast knowledge bases available in each of these research fields, in order to generate a holistic picture of the relationship between education and social outcomes. The first phase of the SOL project attempted to develop a coherent conceptual framework using “self-in-context” and “absolute, relative and cumulative (ARC)” models based on theories in the fields of developmental psychology and political science. The second phase of the SOL project derived implications from these models, and used empirical analyses to evaluate the viability of different hypotheses. The empirical framework is presented in this report in order to make clear the type of empirical evidence used and how it can be interpreted. Although the framework has become more transparent, coherent and holistic, there is a need for further efforts in this direction. In the absence of such a framework,⁴ it would be difficult to enhance intersectoral research collaboration. Without enhanced research collaboration, it would be difficult to take full advantage of the rich knowledge base in diverse areas of research.

Expanding the focus to other domains of social outcomes

This report focused on three domains of health, *i.e.* obesity, mental health and alcohol consumption, and three domains of civic and social engagement, *i.e.* civic participation, political participation and trust/tolerance. These were chosen on the basis of their policy relevance and because they are likely to have significant effects on other key indicators of well-being and social progress.⁵ In evaluating the relationship between education and these domains, this report highlights the general lack of relevant research, so that the question

of whether and how education raises these outcomes cannot be adequately answered. While this calls for more research, the good news is that the areas in which the evidence base is weak have been identified. These points are addressed in Chapters 3, 4 and 5. However, other domains also deserve in-depth analysis. They include crime, religion, patriotism and ecological behaviour. Researchers in various disciplines are already tackling many of these issues. It will be important to gain an overall picture of the relationship between education and these domains as well.

Determining causal effects and pathways

This report shows that there is rather limited evidence of causal links. This is in part due to the lack of sufficient data to make causal inferences and identify causal pathways.⁶ It is also due to the difficulties in identifying and estimating parameters of structural models (*i.e.* theoretical models) of decision-making (Heckman, 2010). While there is a significant amount of information on the causal effects of education at the secondary school level, few studies have evaluated the causal effects of education at the tertiary or pre-compulsory school levels. This is because valid instruments that can be applied to implement quasi experiments at these levels of education are rarely available. This is unfortunate, since an increasing number of studies suggest that early childhood education and care is likely to be important for fostering children's cognitive, social and emotional skills, and, consequently, their health outcomes. There is also indirect evidence suggesting that tertiary education is more strongly related to some domains of social outcomes than education at other levels. This points to the importance of identifying strategies to evaluate the causal impact of education at both ends of the formal education cycle. In the absence of experimental data and longitudinal data for a large number of countries, it may be useful to consider options for making the best use of cross-sectional data. This would also involve systematically collecting policy information from many countries in order to carry out policy analysis empirically, which involves identifying counterfactual states.⁷

The literature increasingly generates evidence on causal pathways, primarily by evaluating specific policy interventions. While this evidence is very useful, in general it is not grounded in economic models that are formulated to answer the policy question or intervention (Heckman, 2010). In addition, this evidence does not provide information about the relative impacts of different causal pathways. For policy makers, it is important to understand what works, why it works and what works better. Heckman (2010) suggests a new innovative way of conducting policy analysis empirically that combines the features of the programme evaluation literature (which aims at estimating the effects) with the structural approach (which aims at estimating the parameters of the theoretical model). With this new approach, it would be possible to clarify what works

and why it works. In order to address the question of what works better, one approach is to conduct cost-effectiveness (or cost-benefit) analyses of different interventions. This is done in Chapter 5, which evaluates the cost-effectiveness of various educational interventions on obesity. Another way is to evaluate the contribution of each causal pathway in explaining the relationship between education and social outcomes. Cutler and Lleras-Muney (2010) provide evidence using the latter method based on rich longitudinal and cross-sectional data from the United Kingdom and the United States. Both types of analysis can be usefully extended to other domains of social outcomes and across countries, although the extent to which this can be done well depends on the availability of quality data.

Understanding contexts that matter

Epidemiology, public health and sociology provide a significant knowledge base on family and community factors that matter, not only directly for health and civic and social engagement, but also for how efficiently schools contribute to health and civic and social engagement. While this report could not fully account for the diverse evidence available, it is clear that these contexts play a significant role and need to be taken more seriously when explaining the relationship between education and social outcomes. The evidence base appears to be strong in the field of health, possibly owing to the availability of quality data. However, there is not enough information available to evaluate how contexts matter for fostering the role of schools in promoting civic and social engagement. A recent European study on the social determinants of vocational education and training (VET), for example, evaluates how the social benefits of VET depend on the availability of welfare services (Sabates *et al.*, 2010).

Evaluating other types of learning

This report shows that most empirical studies shed light on the role of formal schooling and early childhood education and care, but that there is still very limited knowledge about the role of adult education in fostering social outcomes. If a policy goal is to empower not only children but also adults to better tackle health and civic and social engagement issues, it is necessary to know how adults develop skills, attitudes and habits that lead to better social outcomes. A Canadian study suggests that the returns to health and civic participation from raising adult literacy are significant, and that the simple practice of reading magazines and newspapers daily can lead indirectly to better health outcomes (Canadian Council on Learning, 2008). A similar study carried out for a larger set of countries could yield a significant amount of policy-relevant information.

Using micro-data that raises analytical power

In order to understand causal relationships, it is preferable to use large-scale longitudinal micro-data that follow individuals over time. For health, this report has highlighted research using the US National Longitudinal Survey of Youth (NLSY) 1979 and the UK National Child Development Survey (NCDS). For civic and social engagement, the UK Citizenship Education Longitudinal Study (CELS) is among the few sources available for evaluating the effects of education (or of citizenship education) on civic and social engagement. It is not possible to overstate the importance of promoting this type of data collection for other domains of social outcomes and other OECD countries in spite of the high cost and painstaking efforts involved. The long-term returns to such an investment are likely to be high given the amount of policy information such data provide. In the absence of such data, an alternative approach may be to make better use of available cross-sectional data and compare outcomes across countries.

OECD (2007b) suggests that qualitative research may complement quantitative analyses based on longitudinal data. This approach collects relevant background information about the family, school and community environments that accompany the lives of individuals. Such information may reveal contexts and pathways underlying education's influence that it is not possible to discern using quantitative analyses. It can also be used to better interpret or validate related analyses based on quantitative analyses. Moreover, system-level information on school organisation, teacher quality and school facilities may also add significant insights.

6.4. The role of the OECD

The difficulty in pushing forward these policy and research agendas is tremendous, and it would no doubt involve a long period of time and considerable efforts by stakeholders working in different disciplines. The OECD, and in particular the Centre for Educational Research and Innovation (CERI), can make a useful contribution in various areas.

Intersectoral policy dialogue

One of the key messages stemming from this report is the need to foster policy coherence across various sectors, including education, health, family/social policies and agriculture. This list will no doubt expand as it becomes clearer how policies in other government sectors interact with policies in the fields of education and health and play a prominent role in shaping the context for learning and health-related behaviour. With better policy coherence, the effectiveness, efficiency and sustainability of policies and school practices are likely to be enhanced and result in better health and civic and

social engagement outcomes for citizens and reduced expenditures for governments. CERI is well positioned to foster policy dialogue by mobilising data, information and policy experience in member countries and to elucidate and promote best practices.

Intersectoral research dialogue

This report was prepared using evidence principally from the areas of education and economics. The scope of the project did not permit full exploitation of the rich evidence available in fields such as epidemiology, medicine, political science and sociology. In discovering the range of evidence available in other sectors, it was apparent that the research for such work needs to be intersectoral. Future work needs to take this into consideration and to take a more holistic approach to identifying appropriate evidence and evaluating its implications. One way to do this would be to establish research panels consisting of representatives from different areas of research. The panel members' role would be to ensure that the conceptual framework and empirical strategies take account of the wealth of knowledge available across the different research areas.

Analysis

CERI is also well placed to contribute to the knowledge base. Its comparative advantage lies in its access to expertise, micro-data⁸ and information on policies and institutions in different sectors. CERI can usefully mobilise these resources to address some of the key areas of SOL research for which there is still a shortage of robust evidence.

Education and health

This report examined a number of studies that evaluate causal relationships (mostly using quasi-experiments) and identify causal pathways. Unfortunately, these studies were conducted on different countries and areas and are inconsistent. This makes it difficult to extract the common features of education systems that work and to identify the conditions that drive differences in the performance of education systems across countries. This calls for a consistent and systematic empirical analysis across a large set of OECD countries. It may not be realistic to use rich longitudinal data owing to the limited availability of such data in many OECD countries. It is however feasible to conduct analyses based on cross-sectional data. Although use of cross-sectional data significantly reduces explanatory power, it may still be possible to appraise possible causal relationships using instruments that capture policy reforms.⁹ Alternatively, analyses could break down the relative importance of different causal pathways. This would indicate the areas on which policy interventions might focus.

Education and civic and social engagement

Compared to the health domains, much less work has been done on the civic and social engagement domains in OECD countries. Among the most prominent work in this area is the civic education (CivEd) study conducted by the International Association for the Evaluation of Educational Achievement (IEA). This study used cross-sectional micro-data on 14 year-olds from a large number of countries. The limiting factors in the study were the difficulty in evaluating how schools and contexts shape civic participation and the lack of information on citizenship participation.¹⁰ A study by Denny (2003) shows, using the International Adult Literacy Survey (IALS) data for a number of OECD countries, that education has a causal effect on volunteering and civic participation. The limitation of Denny's work is that IALS lacked good indicators for social and emotional skills which have been shown to have a potentially important role in shaping attitudes and actual civic participation. CERI could undertake a similar analysis by exploring the micro-data to be generated through the OECD Programme for the International Assessment of Adult Competencies (PIAAC) which will cover diverse sets of competences, including a range of cognitive and non-cognitive skills.

Education and other social domains

SOL work has thus far focused on health and civic and social engagement. There are obviously many other areas with which education is likely to have a relationship. Recent recommendations by the Stiglitz-Sen Commission (Stiglitz *et al.*, 2009) point to the numerous domains of well-being and social progress that are of high priority in OECD countries. It would be useful to assess this list carefully and identify those that deserve further analysis, such as disease prevention, crime and ecological behaviour.

6.5. Conclusion

Since the start of the first phase of the SOL project in 2005, a conceptual model has been developed to describe the complex mechanisms through which education is likely to play a role in shaping two measures of social progress: health and civic and social engagement. This report has built on this framework to present an empirical synthesis by gathering the fruit of emerging research in this field and providing a further contribution. While the weakness of the evidence base and the need to advance the research frontier is fully acknowledged, a number of important policy conclusions have been drawn and presented in this chapter. These conclusions should do justice to the present state of the knowledge base on the social outcomes of learning; they must be constantly questioned and challenged through continued research efforts and meaningful policy debates.

Notes

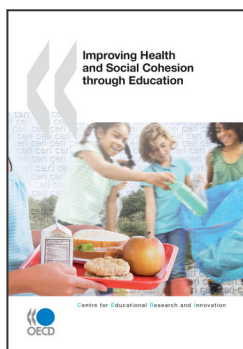
1. WHO (2008) suggests encouraging “schools to replace energy-dense, micronutrient-poor products with milk, yoghurts without added sugar, water, fruit juices without added sugar, sandwiches, fruits, nuts or vegetables”.
2. Sabates and Feinstein (2008) show how co-ordinated policy delivery is more effective in reducing crime compared with policies that are implemented separately by different ministries.
3. For example, Currie (2001) suggests that a simple cost-benefit analysis shows that Head Start, a prominent early childhood education and care programme in the United States, would pay for itself in terms of cost savings to the government if it produced even a quarter of the long-term gains of model programmes.
4. As emphasised in OECD (2007b), such a framework does not necessarily need to be composed of a single unified model, but can be a coherent portfolio of testable models.
5. For instance, civic participation and trust have been shown to affect economic growth and the smooth functioning of democracy.
6. Large-scale longitudinal data, experimental data or twins’ samples are rarely available. The challenges in making casual inferences are also due to the difficulties in identifying and estimating parameters of structural models (*i.e.* theoretical models) of decision-making (Heckman, 2010).
7. This could be achieved by having information on the same individual under two alternative educational interventions and comparing outcomes from these interventions. Heckman (2010) suggests that causal comparisons are possible when contrasting the outcomes in alternative states holding other factors the same for the individual.
8. Micro-data may be collected at the level of individuals (*i.e.* children and adults) as well as schools.
9. It would be of particular interest to identify policy reforms that capture access to tertiary education.
10. The CivEd study instead used intended participation.

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