Introduction

Discovering what does not work in overcoming disadvantage in education can be just as important as identifying what does work, in order to be able to make well-founded judgements about the difference between the two. That is what this book has done. Along the way, some approaches and techniques lauded by others have been shown not to work, meaning that the opportunity costs and likely damage caused by such approaches should cease. Some ideas have shown promise, and need to be developed further by ethical rigorous programmes of design and evaluation. Some approaches might work, are desirable in their right, and would be so cheap and easy to implement that they are a reproach to any society that does not do them. And finally, a small number of very promising interventions have survived critical scrutiny. This chapter sorts out which is which, and thus points to the way forward for research, education systems and wider society. It deals first with some suggestions for research.

Suggestions for research and evidence collection

One of the firm conclusions from this book must be that there is a need for better research and evaluation than currently occurs in education (especially outside the US). Whether it is the misuse of large datasets or the weak studies encountered in reviews, a lot of the worst research reported could be eliminated easily. It could be eliminated by the funders, following the lead of those like the IES in the US or EEF in the UK, who target their budget on finding out what works. It could be eliminated by pressure applied through consideration of ethics (Gorard 2013). The most unethical research is weak research that tells us nothing of value. Poor studies, with conflicts of interest or lack of concern about clarity and logic, do considerable damage. They waste the time of everyone involved in them, and everyone who has to try and read them. They waste the money of the taxpayers and charity-givers that fund them. But most crucially, they damage the life chances of those disadvantaged students that their authors often claim to care about - by forcing out or obscuring good research, and by offering incorrect answers to real-life questions. The opportunity cost is that students who might have done better have lost their one shot at success. The quality controls for education research do not work well, mostly because poor work is so prevalent that its creators inevitably play important roles in 'safeguarding' it, through various review processes. This situation is a scandal.

Mixed in with this games-playing approach to research are a minority of genuine, if flawed, attempts to explain and overcome problems. In a time of economic downturn it is perhaps even more important that policy-makers commission and abide by rigorous independent evaluations of their ideas. The cost of proper research, of a kind that is rare in education, is minimal in comparison to the cost of policy interventions of the kind that happen almost continuously. So it is possible to save money on ineffective solutions before they go national and to improve provision by backing those schemes with the most chance of success. Governments need to pay more attention to rigorous research evidence than they are doing now.

There has been very little rigorous work on the causes of post-compulsory participation in education, which is quite surprising since widening participation has been a favoured policy for more than a decade in the UK and elsewhere. Prior reviews of specific areas of participation such as post-16 (See et al. 2011) and HE (Gorard et al. 2007) largely confirm this gap. Work could be commissioned in the most promising areas. However, given that these same reviews also note that participation is closely related to prior attainment at school, measures to improve experiences of school could have a longer-term impact on participation as well.

In general, there was no consistent reporting of effect sizes in the studies of compulsory schooling reviewed here. This is partly because the evidence in most areas is generally too immature at present, and partly because most authors still rely inappropriately on significance testing. Without more consistent use of effect sizes, it is not possible to conduct either a good meta-analysis of impacts or a cost-benefit analysis of interventions in each area. It is important that future work moves towards estimates of both, and that funders and researchers realise the importance of this step. For the same reason, even where there is evidence for the impact of an intervention, without effect sizes there can be no differential effectiveness estimates for specific sub-groups of potentially disadvantaged learners such as low SES, low attaining, or SEN students. Some studies did focus on specific sub-groups by design and these are noted throughout. This is very different from statistical dredging for differences by sub-groups after the research has been conducted.

Another really simple improvement that could be made in studies that involve statistical modelling would be to end the schisms between fields and disciplines. One of the biggest threats to the validity of such analyses lies in omitted variable bias (Gorard 2013). Yet psychologists continue to work with almost no consideration of SES or prior attainment, sociologists with no measures of motivation, and so on. Using a fuller range of possible explanatory variables inevitably leads to a smaller possible causal claim for any one of them — which is perhaps why the schisms suit so many of the authors cited in this book. Psychologists can claim predominance of mental processes over structural factors, and sociologists can claim the opposite, but neither group actually tests this in any way. And of course the problem is more widespread than this simple example, encompassing all of the social sciences and beyond.

A particular concern is that any area of research may become dominated by only one style of work, contributing to only one part of a causal model (the longitudinal work on self-concept is a clear example). On the other hand, an intervention study in any area would generally be premature and unethical unless there is a prima facie case that the intervention would be effective. Therefore, each iteration of the research cycle legitimately starts with exploratory development work which is often small-scale and tentative, or based on existing data. However, in the same way that it would be unethical to move to intervention studies with only this preliminary basis to justify it, it is also unethical not to pursue promising developments into efficacy and cost-effectiveness trials and, depending on results, to national rollout and monitoring (Gorard and Cook 2007). Inevitably, even many promising ideas will not work. But this is no reason not to test them, as appears to happen too often at present.

The principles of overcoming disadvantage

Before summarising the practical and user implications of this book, it is worth being a little clearer about what we are all trying to achieve, perhaps by taking a lesson from the students in Chapter Seven. Overcoming disadvantage does not mean that all educational outcomes should be equal or equivalent for everyone. That would not be fair, because it would not allow for recognition of choice, merit, effort or talent. Equally, overcoming disadvantage means that differences in outcomes should not be systematically stratified in terms of indicators of disadvantage. That would not be fair because initial disadvantage does not allow true equality of opportunity. Therefore, we need to distinguish between outcomes that should be equal, and those that are entitlements or requirements based on a universal principle of justice, from outcomes that can legitimately be distributed unevenly because they are deemed the responsibility of the individual involved.

This leads quickly to three important questions for readers of this book. Collectively, these questions should become topics of widespread debate. It appears that many commentators and policy-makers hold latent views on these key questions that are in tension if not blatantly contradictory when spelt out. These questions are not for us as authors, or any individuals or groups, to answer alone. Yet, until they are settled much of the apparent debate about how to overcome disadvantage will be distorted by commentators with different but undeclared views on these questions. There are other such questions about what a just and fair education system would look like, but these three will do for now.

• At what age or stage does initial education cease to be a threshold entitlement and become a resource differentiated by merit?

Increasingly, all countries have planned an initial education system that is compulsory for all, and that only becomes partial after a certain age (or stage). In the UK, for example, schooling has traditionally been compulsory until the age of 16. The crucial cut-off has risen since 1945 from age 14 to 15 then 16 and now to 17 and soon 18. After this, access to education or training becomes voluntary, and the various routes through post-compulsory education become selective, especially the opportunities for higher education. It is not clear which if any of these ages is the correct one, or whether the cut-off should be based on age at all rather than achievement or satisfaction. It is anyway not at all clear why education should be universal in one year for an individual and then so suddenly become selective in the next year. In fact, policies such as widening participation in higher education suggest dissatisfaction with the existing selection process, even for young adults. And practices such as grade retention at school which are widespread in many countries suggest dissatisfaction with age-related criteria even for young children. Is there an age up to which it is fair for the state to intervene to equalise outcomes or to ensure that all citizens reach a threshold of literacy or numeracy, for example? Or is such intervention fair over the entire life course?

There are three contradictory principles underlying the provision of most education systems. To some extent, opportunities must be equal and open to all as discussed in Chapter Four, meaning that some outcomes will tend to be unequal (dependent upon luck, talent and effort perhaps). To some extent, outcomes such as a threshold competence in literacy and numeracy are entitlements, which mean deploying unequal resource as discussed in Chapter Nine. Both of these ideas are clearly fair, and the task is to decide the domains in which they apply. And to some extent, opportunities are based on past performance in education. It is not so clear that this is fair.

• *Are qualifications obtained through merit?*

As illustrated in Chapter Eight, the qualifications obtained by young people are stratified in terms of their earlier attainment, and family and background characteristics. It is well-known that males in developed countries are less likely to obtain any high level generic form of qualification, for example. This means that any selection of students on the basis of qualifications would lead to the under-representation of males. The same argument could be made for variables about social class, some ethnic groups, the age of the applicant and many others. Using the socially-stratified variable of prior qualification to select people for future education or employment must lead to these same patterns of inequality appearing in education and employment. Yet in many countries, it is illegal to select on the basis of sex, age etc. but legal to use qualification as a proxy that amounts to practically the same thing.

This is an issue that societies need to debate urgently. Currently, many commentators and policy-makers adopt the contradictory stance of allowing or encouraging the use of qualifications as a determinant, and at the same time admitting that qualifications could be unfairly awarded and asking that this unfairness is somehow taken into account. Two principles of justice are clashing here and it is important to be much clearer about which applies to which domain. One possibility is to reject qualifications as not being an outcome of merit (talent or effort) and so not allow selection on that basis, or even not allow selection at all. This means that males and females can be accepted equally, for example, even though the average qualifications of the former may be lower. This is fair if previous qualifications have been awarded unfairly. If not, then the only real alternatives are to continue to use a flawed and unfair mechanism, or to make a stand that qualifications are fair and that we must accept the stratified consequences. Does this mean that stratification is inevitable in a free society?

• Should an individual be permitted to assist others, by using an advantage they may have gained through their own talent?

If one individual can genuinely help another, then the second individual gains an advantage relative to anyone without that help. If the first individual is in a position of advantage then their advantage becomes 'inherited' by the second, and this could lead to stratification of outcomes, on average. On the other hand, if we deny that an individual is permitted to help another of their own choosing then we are creating an unpleasant-sounding society, and perhaps reducing the motivation to do well in life or to do good things like helping others. Or rather we might demotivate those who want to do well in order to help others, but not demotivate those who want to do well in order to be selfish. This seems perverse.

An example might clarify the problem. Money has been invented as a cypher that can be exchanged conveniently for goods and services. It is generally permissible for an individual to use money earned through their own effort or success to pay for food, shelter, travel etc. They could also use it for luxuries, holidays, and they can even waste it. Currently, they could also use it to assist their child's education, or leave this money to their child after death. If they do this, the child will gain a likely advantage in life that is not merited by their own talent or effort. Yet if society bans either of these last two actions as unfair, then the value of money is markedly less, and it will become less attractive to those who are meant to be earning it. We will also have created a situation where waste and luxury are condoned, but helping some others like children is frowned upon. The same kind of argument as used with money could be advanced about the transfer of skills, knowledge or taste from one person to another. An individual can pass such useful things on to others. Indeed Chapter Ten advocates this and it is after all what formal education is about. But this also means that the

recipient might then be advantaged, because it will be hard to overcome the influence of parental occupation or education on a child's opportunities. If this kind of parental assistance were banned (as if that were enforceable) then part of the beautiful parent:child relationship of co-operative learning has been destroyed. Perhaps it should be permitted, but the state should intervene to give the same advantages to all? Perhaps this is what universal, compulsory, free education is intended to do. If it is not doing this, or not even attempting to do this, perhaps schools should lose their special status as the only compulsory state treatment for all citizens, and one of the most expensive investments to boot. This brief outline begins to reveal some of the complexity involved in answering this and the previous questions, and also the importance of the answers for overcoming disadvantage in a coherent manner.

A further issue concerns the indicators of disadvantage themselves. To be officially poor in the UK, as denoted by eligibility for FSM, is very different from being poor in sub-Saharan Africa (Chapter Two). Given welfare payments and many free public services such as the National Health Service, a poor family in the UK might objectively still be among the wealthiest in other societies. In principle, the kind of relative definition of poverty used in the UK would still present inequality even if no one were objectively poor. So, perhaps all of the indicators should be looked at in another way. Some, like ethnic origin, are not really indicators of disadvantage at all. Objectively and intrinsically, to be of one origin or another is no advantage or disadvantage. Where ethnic 'gaps' show up, such as in achievement, this is presumably a result of something else including prior family education, historical patterns of immigration, political control or even discrimination. Other indicators, like poverty of income perhaps, are only indicators of disadvantage up to a certain threshold. Or put another way, if the children of the super-rich have different outcomes to the children of the merely rich this would be a different and more tolerably kind of inequality than between average and the super-poor.

A way forward

For the present, and until there is consensus on such pressing but difficult questions, we will assume that there are at least three kinds of outcomes that we want to make fair – equitable treatments, thresholds of entitlement, and equalising interventions. The chapter considers what can and cannot be done to improve the situation in these overlapping categories. Much of the focus is on attainment and participation, but it must be remembered that these are linked to other outcomes, and that these other outcomes may actually be of more value in their own right. Learning has an intrinsic value, and it can be enjoyable and fulfilling. It does not always have to be *for* something else like advancement.

Equitable treatments

A lot of state-funded education should be about equitable treatment, as so clearly identified by the students traversing it. Students should always be treated with respect by teachers, even under difficult circumstances (and vice versa of course). This universal principle should be part of initial and continuing teacher development, while persistent misapplication of this ideal strongly suggests unsuitability to be a teacher and should be acted on appropriately. Similarly, teachers should not have 'favourites' in the sense of students who are treated better outside of any domain in which they have merited it. A higher grade because of better work is

fair. More interaction with the teacher over a prolonged period, or differential application of uniform regulations, because of better work is not fair.

Equitable treatment goes beyond 'rules' for individual interactions however. State-funded education is intended to reduce the influence of background and to provide all children with a good preparation. Everything that can be done to ensure appropriately equitable treatment should be done. In fact, it is so much easier to treat people the same that it is hard to imagine why so much policy attention is devoted to treating them differentially. The expenditure on and allocation of resources to students in schools and other educational institutions should be equivalent (but see exceptions below). The per capita funding to educational institutions should be the same for all institutions and all individuals. The existing school system in England with regulations about allocation of school places, teacher development, inspections, national curriculum, and standard attainment in key stages, are all aimed at standardising schools. So it should make little difference which school a child attends. This would be the ideal.

This means no state-funded diversity of schooling. If, for example, Academies in England are really a superior form of school to the 'bog-standard' local comprehensives then why are only some schools made into Academies? Surely, all students are entitled to this better form of education, rather than the state wilfully continuing to provide what they claim is an inferior experience for some. Similar issues arise in other countries with Free Schools, Charter schools, tracking and so on. In fact, as this book shows, it is not clear that Academies are better than other schools and so the money invested in them could have been used more fruitfully elsewhere. Again, the same could be said about most initiatives that tinker with the types of school available. For the same reason there should be no 11-16 age schools alongside 11-18 schools, or indeed any variation in age range. One of these ranges will be the better for any nation or region as a whole, and should be adopted universally. If it is argued that we do not know which is best then that means we have no reason to vary them (unless for the purposes of a genuine attempt to find out). Similarly, there should be no single-sex and coeducational schools in the same system. Again, one of these forms of schooling will be better for the region as a whole and should be adopted. It means there should be no selection by aptitude or prior attainment within a system that is also compulsory. There should be no differences between schools in terms of their faith-basis, or more simply no faith-basis at all. There should be no private investment (as opposed to welcome charitable giving to the system as a whole), and no curricular specialisms in the compulsory phase (there should be a truly National Curriculum). All young people should be included in mainstream institutions as far as possible (but see possible exceptions below).

Controlling the school mix like this is one of the most important educational tasks for central and local governments. The changes and simplifications above would make a huge difference to the underlying levels of segregation (Chapter Four). However, in any region there will still be segregation in schools caused by the nature and cost of local housing, transport and the historical number of schools. Long-term the impact of such structural factors might be reduced by removing all unnecessarily divisive elements like those above. For example, the changes could reduce the 'premium' price purportedly added to housing near popular schools. In the medium-term further equitable measures might be needed to reduce segregation of any indicator of disadvantage to its minimum level. School places could be subject to family preference, which could be deemed a right, and which is likely to improve the situation to a limited extent. For example, parents in disadvantaged areas will be more likely to express a preference for a school in another area than parents in advantaged areas

will express a preference for one in a disadvantaged setting. More importantly, school places must not be allocated in terms of where people live, or any proxy for that such as distance travelled. This means that free public transport (bussing) must be available for all, which could have many other advantages such as less road congestion in rush hours. Disputed places at over-subscribed schools could be determined by lottery or using overall school mix balance (in terms of disadvantage) as the priority criterion – the disadvantaged student gets priority access to the relatively advantaged school and vice versa. This is fair. The purpose is to make a truly national or regional system of equivalent schools, so that the quality of education received depends in no way on where one lives or who one is. Once this is realised, there would be no need to travel further than the nearest school, and almost no need for place allocation criteria at all anyway.

Practical solutions include:

- Making schools more comprehensive. There should be no curricular specialist schools, no faith-based schools, no selection by attainment or aptitude, no private investment or control of state-funded schools. The same admissions criteria should be applied to every school. This may be cheaper and more effective than many other measures currently used or suggested.
- Offering schools incentives for taking in students from disadvantaged backgrounds;
- Using a banding or quota system to ensure that school intakes reflect the social and ethnic mix of the local population;
- Using a lottery system rather than distance or residence in allocating places in oversubscribed or popular schools. Free transportation should be made available to those entitled to any feasible school not simply to the nearest available.

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It is not possible to list all possible implications here, but because of the importance of teachers (Chapters Six and Seven), it is worth making a few suggestions for the profession. Again, the emphasis should be on equitable treatment and processes. Currently, some applicants to teacher training in England are being rejected on the basis of prior qualifications at some institutions while other applicants with much worse qualifications are being accepted at others. The pass rates into subsequent qualified teacher status are then comparable between the two. This suggests either that qualifications are meaningless (above) or that there is unfairness and inefficiency in the selection process, including likely loss of some highly qualified applicants to the teaching profession. The profession should be national and so the preparation for it should reflect that characteristic. Schools themselves should not employ teachers, and to some extent and within reason teachers employed by the state should be able to be deployed to meet demand just as many other state employees are. This will help avoid the stratification of teachers between areas, and the shortage of teachers in some. Their salaries must be national not local. This means an end, among other things, to incentives or compensatory payments for those living and working in the most popular areas. The local cost of living and housing tends to reflect perceived desirability, so popular locations do not need an incentive or any recompense. They are attractive already. A genuinely national pay scheme provides a kind of incentive for good teachers to work in the less desirable areas. Policies like the London Allowance in England undercut that fairness and should cease. The problems are far worse outside London. Again it should be easier to keep things the same than to make artificial and probably harmful distinctions.

Practical solutions:

- Nationalise the selection and development of professional teachers
- Introduce a central employment scheme for teachers

As this book shows, if these changes combined then make any difference to attainment outcomes at all (and this is not their main purpose), they are likely to improve results and reduce the poverty gradient. This is because of the diminishing returns on any 'investment' in the already advantaged learners, and the inefficiency produced by enhancing rather than counteracting 'privileged student bias' (Chiu and Khoo 2005, p.576). Most of the proposals above also have no obvious cost. In fact, because the system will be simpler, as well as fairer, it will probably be cheaper within a very short time. Quality, equality and cost-effectiveness are firm friends in the educational context.

Thresholds of entitlement

Equitable treatment is a key principle for the organisation of a state education system. But it will lead to unfairness in some situations, such as those where students are entitled to achieve a certain level of proficiency but do not do so as a direct result of a disadvantage beyond their control, or where a minimum level of input is expected from students.

It is reasonable to ask of a state education system that is imposed on all that it yields citizens with certain basic skills. Such skills will change over historical time, but currently they might include a level of proficiency in numeracy, literacy, use of technology, knowledge of societal rights and duties, and in making important life choices for oneself. Perhaps most obviously from the accounts in this book, students have a right to expect a certain minimum level of competence from their teachers. Teachers should be required to allow learners a certain level of control over their own learning. Students should be required to behave with some level of consideration to teachers and other students, if only to make the whole process work at all. If some form of post-compulsory participation in education or training is open to all, then it makes sense to ensure that this is not overly influenced by early decisions or learner-identities. Something like a voucher system could be implemented. If a young person continues from school to a traditional post-compulsory experience, with or without a gap year perhaps, then their voucher is 'cashed'. If they do not continue at that age, then the voucher can remain valid for use later when a more mature experience is desired.

Overcoming disadvantage in school is not only about improving results, and quality of teaching need not be measured in terms student attainment. Education should also be about enhancing students' overall well-being and experiences of learning. All children should be entitled to a pleasant and enjoyable education experience. Enjoyment can be wide-ranging and long term impact on students' lives, such as attitude towards learning and employment. Enhancing students' learning experience is easier than improving teacher effectiveness, which cannot be easily measured or calibrated anyway. Improving the way teachers interact with their pupils in such a way that it enhances students' general well-being and experiences of learning is one way of overcoming disadvantage if it leads to better citizens. Better behaved, respectful citizens are less likely to get into trouble in society and more likely to find employment. This has implications for teacher training and teacher development in reinforcing good practice such as fairness and respect.

All of these are threshold outcomes or rights. In these domains and others like them, equal outcomes would be fair, yet equitable treatment will sometimes be insufficient to achieve this. Rather, unequal treatment is generally required for universal achievement of the threshold. This could be in the form of equalising interventions.

Equalising interventions

Intervening to improve outcomes for a subset of disadvantaged or struggling students is therefore fair, up to a point and within the framework set out so far. It could also be cost neutral or better, largely because so many interventions are currently taking place that just do not work. The money and effort saved in abolishing these can be diverted to developing and sharing the few initiatives that have more promise. This book has shown that we have no evidence that the following well-meaning and plausible-sounding ideas work to improve attainment or participation.

Approaches showing no promise of overcoming disadvantage

- Differential school effectiveness factors, and the associated generic school improvement approach
- Diversity of schooling, including selection and tracking
- Raising student aspirations or parental expectations
- Improving individual attitudes including self-concept, locus of control and similar (but see below)
- Changing individuals' behaviour in terms of paid work or participation in enrichment activities
- Other changes to parental styles, attitudes or behaviour (but see below).
- Use of technology in itself
- Use of extra time such as summer programmes, in itself

There may be cases where a young person could not thrive in a mainstream school setting, and a hospital or similar is preferred. This is not unjust as long as they feel looked after and respected (Gorard and Smith 2010). There are a number of other possible interventions described in detail in the book, including the following, that could be targeted fairly at helping potentially disadvantaged students.

Approaches showing some promise of overcoming disadvantage

- Making schools as uniform as possible (above)
- Offering schools 'incentives' for taking in students from disadvantaged backgrounds, with funding following the student, like the pupil premium policy in England
- Using incentives not for extrinsic motivation to achieve, but for rewarding the components of improvement such as attendance and behaviour
- Parental training and home support for those with pre-school children
- Encouraging parental involvement in education when their child is young, working in collaboration with staff
- Prepare and develop interventions to improve students' social and emotional learning
- Prepare and develop interventions to improve students' civic participation, happiness, and empathy for others
- Improving home:school collaboration and minimising the differences between home and school culture for older students
- Some targeted literacy catch-up programmes developed in the US
- Adult mentoring for struggling students

Education is more than attainment

Serious inequalities and some difficult social problems may be apparent in the population at large in many countries for the foreseeable future, and despite efforts to deal with them via education and other policies. This would never result in there being no differences in outcomes. That would be both unfair and unrealistic. But the differences should not be at threshold levels, and there should not be such large systematic differences between social groups in terms of other outcomes. Meanwhile, there is no need for any government to transport these wider problems into their state-funded schools. As mini-societies in themselves, schools and colleges could be shaped as the kind of wider society we would like, rather than left to represent only the society we have. They can be designed to minimise the experience and impact of inequalities outside schools, affording children and young people a decade or more with a mixed peer group and mutually respectful relationships with adults. To some extent this is what schools and colleges already try to do, but they are hampered by the red herring of differential attainment as it appears to policy-makers and many other commentators. If schools were engineered for their wider purpose more explicitly than at present, then their benign influence could be much greater.