CUBeC Digest

Centre for Understanding Behaviour Change

January 2014

Contents

Introduction

Since the publication of the last CUBeC Digest in February 2013, a number of pieces of CUBeC research have been published across a variety of different education policy priorities. In this third edition of the CUBeC Digest, we summarise the findings from each of these reports (section 1).

- **Reducing risky behaviours through information provision** reviews evidence on schemes that provide young people with information in order to reduce participation in risky behaviours. It concludes that most existing schemes have been effective in shaping perceptions, but not actual behaviour.
- **Leadership and faith schools** provides a brief overview of the issues and challenges for faith school leadership, including a need to maintain distinctiveness, manage the changing context of admissions, build the capacity of the school, manage a range of partnerships and sometimes take a community leadership role.
- **School food: head teachers' and school senior managers' perceptions survey** indicates that the majority of head teachers and senior managers were engaged with food as an issue. Most believed there was a positive relationship between good food and attainment and behaviour in school, suggesting that food is seen as an issue worth engaging with.

Department for Education

- **Teacher pay flexibilities** - The Government is keen to promote the use of flexibilities in teachers' pay with a view to raising teaching standards and the status of the profession. This short report sought to better understand schools' current use of pay flexibilities.

In this edition of the CUBeC Digest, we also publish two complementary articles written by CUBeC researchers in the Policy Focus section.

- **Using school resources efficiently- incentives, information and objectives -** This article by Professor Imran Rasul and Luke Sibieta examines potential ways to improve school efficiency. It argues that the key conditions for improving efficiency are the right incentives (schools keeping the savings from improved efficiency), a supply of high-quality information and a strong perceived link to educational objectives.
- **The use of randomised control trials in research for education policy –** This article by Professor Simon Burgess argues that greater use of randomised control trials could greatly improve education policy. Furthermore, it argues that in England we are in a very strong position to run RCTs because of the existing highly developed data infrastructure.

As well as giving details of research produced by CUBeC, we provide a summary of the great deal of relevant work published by others working in the field since the last edition (section 3).

What is CUBeC? The Centre for Understanding Behaviour Change (CUBeC) includes academic experts of the highest international standing from the fields of economics, neuroscience, cognitive and experimental psychology, sociology, social research and educational research drawn from a range of the country's leading public policy research centres: the Centre for Market and Public Organisation (CMPO), the Institute for Fiscal Studies (IFS) and the National Centre for Social Research (NatCen). The team also includes world-class academic researchers from a number of the UK's leading universities: the University of Bristol, Imperial College London, the Institute of Education (IoE), the London School of Economics and Political Science (LSE), the University of Oxford and University College London (UCL). We are grateful to the Department for Education for providing funding. Further details can be found on the CUBeC website (**http://www.cubec.org.uk/**).

1. CUBeC Research

Reducing risky behaviours through information provision

There is a long history of school-based programmes and other interventions that have sought to reduce young people's participation in risky behaviour in response to government and public concern. However, there is little consensus about which approaches are most effective, or which groups should be targeted. This report explores whether engagement in risky behaviour could be reduced by providing young people with information.

Participation in risky behaviour starts at a young age, suggesting that programmes aiming to prevent these forms of behaviour should focus on the start of the teenage years, if not before. Risky behaviour amongst young people is also very persistent and participation in one type of risky behaviour is predictive of later participation in other forms of risky behaviour. For instance, there is a strong link between drug- and alcohol-related admissions to hospital over time: those who have been admitted for one at age 14-16 are more likely to be re-admitted for either risky behaviour at age 17-19. Similar pupils also display quite different propensities to get involved in risky behaviours depending on which school they attend. Although the way in which school factors affect such behaviour is unclear, school truancy rates may provide a useful way to identify target populations.

The report also reviews the current evidence on the effectiveness of two specific approaches to supplying young people with information to reduce participation in risky behaviour: (i) providing information on the consequences of that behaviour; and (ii) providing information about the true prevalence of that behaviour amongst their peers ('social norms').

Evidence to date suggests that both the consequences and social norms approaches are more successful at altering knowledge and perceptions than changing actual behaviour. While these are necessary first steps to changing behaviour, changing knowledge or beliefs alone is not sufficient. Programmes based solely on the consequences approach appear be particularly ineffective at reducing risky behaviour. The social norms approach has a number of strong advocates, but there are substantive gaps in the evidence base that make it hard to draw conclusions about the overall effectiveness of this approach. In either case, where interventions have been successful at reducing risky behaviour, the impact is typically short-lived. However, interactive programmes do seem to be more effective than those that involve only passive learning; the method of delivery thus seems to be as important as the programme content.

Therefore, there are still many unanswered questions around the effectiveness of the consequences-based and social norms-based approaches. Many of these could be addressed through the implementation of robust trials in a UK context, involving a suitable comparison group and a longer follow-up period.

Reducing Risky Behaviours through Information Provision, Haroon Chowdry (IFS), Elaine Kelly (IFS) and Imran Rasul (UCL/IFS), **https://www.gov.uk/government/publications/reducing-risky-behaviour-through-the-provision-of-information**

Leadership and faith schools

This report provides a brief overview of the issues and challenges for faith school leadership. In 2012, 35 per cent of maintained schools in England had a religious character (6,814 maintained faith schools out of a total of around 20,000 maintained schools), educating just under a quarter of all pupils. Just over two thirds of maintained faith schools were Church of England and nearly 30 per cent were Roman Catholic. The first Hindu, Muslim and Sikh state schools have all opened since 1998, and the first non-Christian faith academy (a Sikh school in Hillingdon) opened in 2011.

Many of the issues and challenges faced by leaders of faith schools are similar to those for leaders of any other maintained school. However, there are some issues which, while relevant to all schools, raise some specific issues for faith schools. Several themes recur in the literature:

- The need to maintain **distinctiveness** as a faith school. This includes retaining the school's religious character, sometimes challenging secular values, and balancing the two priorities of educational attainment and moral and spiritual development.
- The need to manage the changing context of **admissions**, and increasingly provide for pupils of other faiths and of none alongside those of their own faith.
- The need to **build the capacity of the school**, including the recruitment, retention and development of school leaders, staff and governors. This has to be achieved in the context of balancing the importance of having staff who actively practise the faith of the school with the need to maximise staff quality.
- The need to maintain and develop a range of **partnerships**, within the faith community and beyond.
- The need to fulfil the expectations of the wider community and contribute to social cohesion, sometimes taking a **community leadership role**.

Leadership and Faith Schools: Issues and Challenges, Sara Scott and Di McNeish (National Centre for Social Research), **http://www.bristol.ac.uk/cubec/researchreports/leadershipandfaithschools.pdf**

School food: head teachers' and school senior managers' perceptions survey

This report provides the results of a survey of primary and secondary school head teachers and senior managers, which sought to examine their views and their school's policies regarding school food. The responses given by head teachers and school senior managers in the survey indicated that the majority were engaged with food as an issue. Most believed there was a positive relationship between good food and attainment and behaviour in school, suggesting that food is seen as an issue worth engaging with.

It was noticeable that there was a difference between schools in the degree to which head teachers and senior managers felt they were already working towards good food and the extent to which they saw food as a priority. Levels of engagement with school food were related to whether schools felt they needed more help and guidance. These findings caution against a 'one size fits all' approach to engaging with schools about food and reinforce the need to recognize that some schools are further ahead than others.

Schools were supportive of food in the curriculum –most felt that practical cookery should be in the national curriculum and the majority felt that they were already embedding learning about food across the curriculum. This indicates that the case for including food in the curriculum has already been accepted by schools and that the focus should be on ensuring that this is done in the most effective way.

In the majority of schools, head teachers' and senior managers' engagement with food as an issue was translated into activity to drive take-up of school lunches and this appeared to be reaping results with an upward trend in take-up identified. Most head teachers and senior managers felt that their school lunches were performing well on two of the criteria most likely to be identified as important factors in take-up – taste and healthiness – although ratings of affordability were not as high. Some initiatives to support school lunch take-up, such as pupils' involvement in decisions about food, were already in place in most schools, but others were less common, for example, using parents/carers as volunteers. This evidence suggests that schools are willing to adopt policies that encourage take-up and publicising 'best practice' may encourage more schools to introduce initiatives that have been shown to work.

There was no consensus over the best way to improve school food, perhaps reflecting the variation in the levels of activity that have already been undertaken. In developing future guidance on improving school lunches, it is worth considering the finding that standards based on the food stuffs provided were seen as easier to implement, but standards based on the nutritional content of food provided were seen as more effective.

School food: head teachers' and school senior managers' perceptions survey, Sarah Kitchen, Eloise Poole and Natasha Reilly (National Centre for Social Research), **https://www.gov.uk/government/publications/school-food-head-teachers-and-school-senior-managers-perceptions-survey**

Teacher pay flexibilities

The Government is keen to promote the use of flexibilities in teachers' pay with a view to raising teaching standards and the status of the profession. This short report sought to better understand schools' current use of pay flexibilities. In particular, short telephone interviews were carried out with head teachers or other senior managers at schools identified as using recruitment and retention allowances.

Overall, school leaders used recruitment and retention allowances to maximise the quality of teaching staff at their school although a number of other uses were identified, including increasing stability/reducing turnover and maintaining staff morale, and the majority of schools considered the allowances to be effective. In most cases, these allowances were only used for a small number of staff (typically between one and five in the 2011-12 academic year) and a minority of schools were planning to extend their use. The evidence suggests that financial considerations were the main reason for the fairly limited use of pay allowances, but operational difficulties and concerns over fairness were also evident. Secondary schools tended to make wider use of recruitment and retention allowances. They were also more likely to offer them to staff who were considering leaving and more likely to refer to them in advertising a vacancy.

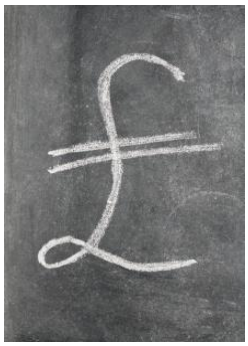
Teacher Pay Flexibilities, Julia Griggs, Ivonne Wollny and Emily Tanner (National Centre for Social Research), **http://www.bristol.ac.uk/cubec/news/2013/14.html**

2. Policy Focus

In this edition of the CUBeC Digest, we also publish two complementary articles. The first, by Professor Imran Rasul and Luke Sibieta, examines potential ways to improve school efficiency. The second, by Professor Simon Burgess, discusses the benefits of randomised control trials for education policy.

Using school resources efficiently – incentives, information and objectives

Professor Imran Rasul and Luke Sibieta



Evidence concretely linking the level of school resources and pupil attainment has proved elusive. The reviews conducted by Eric Hanushek and the OECD have generally concluded that improving how schools spend their money might have a greater impact on attainment than increasing how much they spend. Previous work by CUBeC researchers has also suggested a very high level of variation in terms of how schools in England spend their money, and more than would seem desirable. The question is can we find ways to improve the efficiency with which schools employ their resources?

In order to answer this question, we must be clear about the key conditions that must exist to motivate schools to improve the way they spend their money. Firstly, schools must have the right incentives to improve efficiency and save money. If schools save money and do not keep the financial benefits, then they are unlikely to be motivated enough to improve efficiency in the first place. If they are able to keep the financial rewards from saving money and can then use it to achieve their educational objectives, then their incentives will be pointing in the right direction. Therefore, schools themselves must be the 'residual claimant' on any savings they make. Secondly, schools must have the information and evidence to allow them to pick strategies that have been proven to improve educational attainment. Furthermore, this must apply to schools in similar circumstances, otherwise it could be perceived as less relevant. Thirdly, schools should be able to see a clear connection between improving efficiency and their actual educational objectives. In the case of a private firm, the connection between efficiency and higher profits seems clear. Schools, on the other hand, would need to perceive a strong link between improved efficiency and higher levels of attainment or other educational objectives. To sum up, the key ingredients seem to be the right incentives by being able to keep the financial returns from saving money, high-quality information and evidence seen as relevant, and a strong perceived link to educational objectives.

Given this, what potential ways are there to improve efficiency in schools? Thinking about incentives first, schools in England do currently have good incentives to improve efficiency as they can keep the returns from any savings. This has been further enhanced with greater delegation of spending decisions from local authorities to schools over time, and greater autonomy for academies. However, there are still ways that financial incentives can be improved. The combination of school competition and per-pupil funding can play an important role in driving efficiency. If schools know that they might lose funding if they don't attract enough pupils, they might improve the efficiency with which they use their resources. This was the original argument put forward by Caroline Hoxby as to why school competition might be a rising tide that lifts all boats. However, the school funding system needs to be transparent enough to ensure that schools realise how much per-pupil funding they might lose if fewer pupils attend their school. School funding in England has not been particularly transparent in recent years, with many historical anomalies. Ongoing reforms to school funding represent an opportunity to improve transparency.

Even if schools have the right incentives, they might not act on these incentives if they lack good information. It is therefore important to improve the flow of information to schools, both in terms of its supply and demand. Improving the supply side requires high-quality empirical evidence surrounding the effectiveness of different educational interventions. To date, there has been a distinct lack of high-quality trials of educational interventions in the UK. This gap is now being partly filled by the Education Endowment Foundation, which is increasing the number of randomised control trials (RCTs) funded in the UK. This is crucial to improving the quality of evidence. Development economists such as Ester Duflo have argued that the increased use of RCTs in developing countries has expanded knowledge of what works and improved policymaking. Furthermore, RCTs done in the right way can provide information about the mechanisms driving the effects of policy. For instance, an RCT evaluating the effect of performance-related pay for teachers in India showed not only the effectiveness of this policy, but also allowed the researchers to quantify what changed in terms of classroom practice and the magnitude of positive spillovers. Roland Fryer has also used field experiments to great effect, e.g. suggesting that teacher incentives are only effective when they incorporate loss aversion. RCTs aren't a panacea and can't answer all research questions. However, the more UK policymakers and schools themselves directly interact with such trials, the better. By directly seeing

just how much can be learned from randomised control trials, the demand for such evidence from policymakers and schools may well also increase.

The way information is presented might be just as important. Schools might be more likely to respond to information if it relates to schools in similar circumstances. For instance, presenting benchmarking information for schools with similar intakes in terms of demographics and prior attainment might be more effective than average or best cases. Who receives the information could be just as important. Providing information to head teachers and classroom teachers would ensure information is received by those with the highest educational objectives. However, information could be provided more widely to school governors and parents about the mix of resources used at their school, as compared with schools in similar circumstances but with better educational outcomes. This could engender a reaction in terms of improved efficiency. This could work via yardstick competition, schools simply comparing themselves and realising they could do better, or via direct school competition, with parents deciding with their feet (and the per-pupil funding of their child).

Finally, information can be provided in ways that strengthen the perceived link to educational outcomes. If comparisons in school expenditure patterns between similar schools with different levels of school performance were highlighted more, then schools might pay greater attention to the way other schools spend their money.

Therefore, there seem to be a number of key lessons. Firstly, schools must be able to keep any savings they make and the school funding system should be transparent. Second, there must be a supply of good quality evidence and a demand for it, which could be increased if schools and policymakers interact more directly with RCTs. Schools must also see it as relevant to their particular circumstances and increasing the number of groups targeted by information flows could lead a bigger reaction (e.g. providing information to parents). Thirdly, schools must see a strong connection between financial efficiency and their educational objectives.

The use of randomised control trials in research for education policy

Professor Simon Burgess

A lot of research for education policy is focussed on evaluating the effects of a policy that has already been implemented. After all, we can only really learn from policies that have actually been tried. In the realm of UK education policy evaluation, the hot topic at the moment is the use of randomised control trials or RCTs.

A major part of the impetus for this has come from the Education Endowment Foundation (EEF), see here for more details. This independent charity was set up with grant money from the Department for Education, and has since raised further charitable funding. Its goal is to discover and promote "what works" in raising the educational attainment of children from disadvantaged backgrounds.

Another driver has been the Department's own recent Analytical Review, led by Ben Goldacre (see here for further information). This strongly recommended that the Department engage more thoroughly with the use of RCTs in generating evidence for education policy.

It is probably worth briefly reviewing why RCTs are thought to be so helpful in this regard: their strength is in their capacity to identify and estimate the scale of a causal effect. There are of course many very interesting research questions other than those involving the evaluation of casual effects. But for policy, causality is key: "when this policy was implemented, what happened as a result?" The problem is that isolating a causal effect is very difficult using observational data, principally because the people exposed to the policy are often selected in some way and it is hard to disentangle their special characteristics from the effect of the policy. The classic example to show this is a training policy: a new training programme is offered, and people sign up; later they are shown to do better than those who did not sign up; is this because of the content of the training programme … or because those signing up evidently had more ambition, drive or determination? If the former, the policy is a good one and should be widened; if the latter, it may have no effect at all, and should be abandoned.

RCTs get around this problem by randomly allocating exposure to the policy, so there can be no such ambiguity. There are other advantages too, but the principal attraction is the identification of causal effects. Of course, as with all techniques, there are problems too, including the question of how generalizable are the results from what is necessarily a particular experiment.

Following on from all this, the Department of Education is now getting to grips with RCTs. To help this process along, CMPO has organised through CUBEC two workshops in DfE all about RCTs. The first was for analysts and called "How to be a Knowledgeable User of RCT Evidence" and involved presentations from Michael Sanders (Cabinet Office and CMPO), Professor Imran Rasul (UCL and

IFS) and myself. The second is on the value of RCTs for policy-makers and is given by Professor Sally Sadoff from UC San Diego, a leading practitioner and proponent of RCTs in education.

In the remainder of this piece, I want to emphasise that in England we are in a very strong position to run RCTs because of the existing highly developed data infrastructure. Specifically in schools, we have a great base resource that we can build RCTs on top of – namely, the National Pupil Database (NPD).

This helps in at least three important ways. First, it improves the trade-off between cost and statistical power. One of the initial decisions in an RCT is how many participants to recruit. The greater the sample size, the greater the statistical power to detect any causal effects. But of course, also, the greater is the cost. These trade-offs can be quite stark. For example, to detect an effect size of at least 0.2 standard deviations at standard significance levels with reasonable certainty (80% power in technical terms) we would need a sample of 786 pupils, half of them treated. If for various reasons we were running the intervention at school level, taking account of the similarities between pupils in schools, we would need around 24,600 pupils.

This is where the NPD comes in. We can use the wealth of data in the NPD to reduce observable differences between students and improve the precision of our estimate of the intervention's effect: essentially, we use the data to identify very similar pupils, and assign one to be 'treated' and one to be a control. This greatly improves the precision of our estimation, which in turn means that the trade-off between cost and power improves. Returning to the previous numerical example, if we have a good set of predictors for (say) GCSE performance, we can reduce the required dataset for a pupil-level intervention from 786 pupils to just 284. Similarly for the school-cohort level intervention, we can cut back the sample from 24,600 pupils and 160 schools to 9,200 pupils and 62 schools. The relevant correlation is between a 'pre-test' (this might literally be a pre-test, or it can be a prediction from a set of variables) and the outcome of interest.

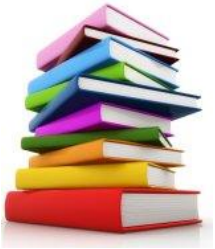
Second, the NPD is very useful for dealing with attrition. Researchers running RCTs typically face a big problem of participants dropping out of the study, both from the treatment arms and from the control group. Typically this is because the trial becomes too burdensome or inconvenient, rather than on principle (they did sign up voluntarily in the first instance.) This attrition can cause severe statistical problems and can jeopardise the validity of the study.

The NPD is a census and is an administrative dataset, so data on all pupils in all (state) schools are necessarily collected. This obviously includes all national Key Stage test scores, GCSEs and A levels. If the target outcome of the RCT is improving test scores, then these data will be available to the researcher for all schools. Technically this means that an 'intention to treat' estimator can always be calculated. (obviously, if the school or pupil drops out and forbids the use of linked data then this is ruled out, but as noted above, most dropout is simply due to the burden).

Finally, the whole system of testing from which the NPD harvests data is also helpful. It embodies routine and expected tests so there is less chance of specific tests prompting specific answers. Although a lot about trials in schools cannot be 'blind' in the traditional way, these tests are blind. (A 'blind' test is one in which the participant does not know whether they were in the treatment group or the control group: the conditions under which drug testing is classically conducted.) They are also nationally set and remotely marked, all of which adds to the validity of the study. These do not necessarily cover all the outcomes of interest such as wellbeing or health or very specific knowledge, but they do cover the key goal of raising attainment.

In summary, relative to other fields, education researchers have a major head start in running RCTs because of the strength, depth and coverage of the administrative data available.

3. Other Published Research



In the first section, we summarised the list of work published by CUBeC since the last issue of the digest was published. In this section, we go beyond this and provide a summary of other published research relevant to education policy that has been released since the start of the year. This includes work published in academic journals and working papers.

The list is divided into five subsections: school standards and behaviour; families and children; school system and funding; workforce; and transition to the labour market.

School Standards and Behaviour

Countries vary substantially in the length of instruction time students receive. Here we highlight two papers looking at the effects of increased instruction time overall and the effects of an extended school day. In light of increased use of digital resources in the delivery of education, we also review two papers examining the effects of increased computer access and the effects of internet-based instruction. Finally, a number of papers have been published on behavioural issues, including the effects of different disciplinary policies, differences between boys' and girls' behaviour and two interesting papers looking at bullying, both in terms of its later-life effects and pupils' willingness to report such incidents.

Length of Instruction

What are the effects of providing **additional instruction time to students** in low achieving lower secondary schools? An experiment in Southern Italy found that the programme raised test scores in mathematics in schools characterised by students from less advantaged backgrounds. Targeting the best students with extra activities in Italian language came at the cost of lowering their performance in mathematics. The positive effect documented for mathematics is driven by larger effects for the best students in the group.

Should We Increase Instruction Time in Low Achieving Schools? Evidence from Southern Italy, Erich Battistin, Elena Claudia Meroni, *IZA Discussion Paper No. 7437*, May 2013, **http://ftp.iza.org/dp7437.pdf**

This new study conducts a randomized field experiment to estimate **the effect of an extended day program** in seven Dutch elementary schools on maths and language achievement. The empirical results show that this three-month program had no significant effect on maths or language achievement.

The effectiveness of extended day programs: Evidence from a randomized field experiment in the Netherlands, Erik Meyer, Chris Van Klaveren, *Economics of Education Review, Vol. 36, pp. 1–11,* October 2013, **http://www.sciencedirect.com/science/article/pii/S0272775713000526**

Digital Resources

Does **lack of access to a computer at home impede educational achievement**? A random experiment in California provided schoolchildren with computers at home. Computer ownership and use increased significantly, but there were not any effects on educational results, attendance and disciplinary actions.

Experimental Evidence on the Effects of Home Computers on Academic Achievement among Schoolchildren, Robert W. Fairlie, Jonathan Robinson, *American Economic Journal: Applied Economics*, 2013, Vol. 5 No. 3, pp. 211-240, July 2013, **http://www.povertyactionlab.org/publication/experimental-evidence-effects-home-computers-academic-achievement-among-schoolchildren**

This paper presents the first experimental evidence on **the effects of live versus internet media of instruction**. The authors find modest evidence that live instruction in front of a class dominates instruction provided over the internet. These results are particularly strong for Hispanic students, male students, and lower-achieving students.

"Is it Live or is it Internet? Experimental Estimates of the Effects of Online Instruction on Student Learning" David Figlio, Mark Rush, and Yu Lin, *Journal of Labor Economics, forthcoming,* **http://www.press.uchicago.edu/journals/jole/forthcoming.html?journal=jole**

Behaviour and discipline

One important decision a school faces is how strictly to punish infractions in school. A new study estimates the **relationship between school discipline and achievement** and finds that discipline has an overall positive influence on student performance. The threat of being suspended deters infractions and although losing classroom time in a suspension reduces performance for suspendees, reduced exposure to disruptive behaviour has large positive impacts on performance for others in the class.

School Discipline: A Source or Salve for the Racial Achievement Gap? Josh Kinsler, *International Economic Review, Vol. 54 No. 1 pp. 355-383*, January 2013, **http://onlinelibrary.wiley.com/doi/10/1111/j/1468-2354.2012.00736.x/full**

This paper uses unique survey data to estimate **the causal impact of suspension on the educational outcomes of those suspended**. It finds that suspension is strongly associated with educational outcomes. However, in contrast with the previous article, they find that the relationship is unlikely to be causal. The absence of a negative causal impact of suspension on educational outcomes suggests that suspension may continue to play a role in school discipline without harming the educational prospects of those sanctioned.

Is There an Educational Penalty for Being Suspended from School?, Deborah A. Cobb-Clark, Sonja C. Kassenböhmer, Trinh Le, Duncan McVicar and Rong Zhang, IZA Discussion Paper 7794, December 2013, **http://www.iza.org/en/webcontent/publications/papers/viewAbstract?dp_id=7794**

Do **behavioural problems affect girls and boys differently with respect to school outcomes**? The authors of a new study find that the school outcomes for girls with abnormal externalizing behaviour are not significantly different from those of boys with the same behavioural problems. Most of the gender differences in Reading and Math cannot be related to gender differences in behavioural problems.

Gender Differences in the Effects of Behavioral Problems on School Outcomes, Jannie H. G. Kristoffersen, Nina Smith, *IZA Discussion Paper No. 7410*, May 2013, **http://ftp.iza.org/dp7410.pdf**

Bullying

Having been a victim of bullying may have economic implications later in life. New work suggests that labour force participation and hourly wages are negatively affected by bullying. In particular, men, homosexuals, immigrants, and those having lower human capital are more negatively affected by bullying. Gaps between minority and majority groups, especially for gay men and the disabled, can be partly explained by bullying incidents.

Bullying at School and Labour Market Outcomes, Nick Drydakis, *International Journal of Manpower, forthcoming,* **http://ftp.iza.org/dp7432.pdf**

Many children do not tell their teachers when they have been bullied. This study examined junior school pupils' reports of **support received after disclosing being bullied to teachers**, and associations with intentions to disclose in the future. Higher support increased the likelihood of informing on future bullying episodes. These effects were stronger for boys than girls.

Helping counts: predicting children's intentions to disclose being bullied to teachers from prior social support experiences, Michael J. Boulton, Debborah Murphy, Julie Lloyd, Sabine Besling, Jennifer Coote, Jennifer Lewis, Roxanne Perrin, Linda Walsh, *British Educational Research Journal, Volume 39, Issue 2, pp. 209–221,* January 2013, **http://onlinelibrary.wiley.com/doi/10.1080/01411926.2011.627420/abstract**

Children and Families

With formal childcare continuing to expand in the UK, it is important to understand the effects of such provision on parents and children. Does increased childcare provision increase maternal employment? Are there any undesirable consequences for children attending formal childcare at young ages, or does it improve outcomes? What is the effect of home learning environment at young ages on children? Here, we highlight a number of interesting studies seeking to answer just such questions.

Maternal employment

The current body of empirical evidence for **the effect of public child care on maternal employment** is inconclusive. However, a new study finds that the introduction of a legal claim to a kindergarten place in Germany increased attendance of three-year olds. It also found large and positive effects of public child care on maternal employment.

Public Child Care and Mothers' Labor Supply - Evidence from Two Quasi-Experiments, Stefan Bauernschuster, Martin Schlotter, *CESifo Working Paper No. 4191*, April 2013, **http://ideas.repec.org/p/ces/ceswps/_4191.html**

Maternal employment could have positive or negative effects on the cognitive outcomes of school-going children. Authors of a new study find that children's test scores are higher when their mothers work.

The Relation between Maternal Work Hours and Cognitive Outcomes of Young School-Aged Children, Annemarie Künn-Nelen, Andries de Grip, Didier Fouarge, *IZA Discussion Paper No. 7310*, March 2013, **http://ftp.iza.org/dp7310.pdf**

In this study the authors analyse **the association between maternal employment and childhood obesity** and **the effects on obesity's main drivers: calorie intake and physical activity**. The analysis provides little evidence for any association between maternal employment and childhood obesity, diet or physical activity.

Maternal Employment and Childhood Obesity: A European Perspective, Wencke Gwozdz, Alfonso Sousa-Poza, Lucia A. Reisch, Wolfgang Ahrens, Stefaan De Henauw, Gabriele Eiben, Juan M. Fernández-Alvira, Charalampos Hadjigeorgiou, Eva Kovács, Fabio Lauria, Toomas Veidebaum, Garrath Williams, Karin Bammann, *Journal of Health Economics, April 2013,* **http://ftp.iza.org/dp7371.pdf**

Effect of Childcare on Child Outcomes

Initial **evaluations of universal childcare programs** in Quebec indicated they led to various undesirable outcomes. A new study confirms some of these previous findings. The authors find a decline in motor-social development scores in Quebec relative to the rest of Canada. Most of the negative impacts appear to be driven by children from families who only attended childcare in response to the implementation of this new universal childcare policy in Quebec.

New Evidence on the Impacts of Access to and Attending Universal Childcare in Canada, Michael J. Kottelenberg, Steven F. Lehrer, *NBER Working Paper No. 18785,* February 2013, **http://www.nber.org/papers/w18785**

How much of the income-based gaps in cognitive ability and academic achievement could be closed by a two-year, center-based early childhood education intervention? Data from the Infant Health and Development Program (IHDP), which randomly assigned treatment to low-birth-weight children from both higher- and low-income families between ages one and three, shows much larger impacts among low- than higher-income children. Projections suggest that offering such a program to low-income children would essentially eliminate the income-based gap at age three and between a third and three-quarters of the age five and age eight gaps.

Can Intensive Early Childhood Intervention Programs Eliminate Income-Based Cognitive and Achievement Gaps?, Greg J. Duncan and Aaron J. Sojourner, Journal of Human Resources, September, 2013, **http://jhr.uwpress.org/content/48/4/945.abstract**

This paper investigates the **relationship between attendance at pre-school school and children's outcomes into early adulthood** using the Longitudinal Study of Young People in England. Using matching methods to control for a very rich set of child and family characteristics, they find evidence that pre-school childcare moderately improves results in cognitive tests at age 11 and 14, and 16. Positive effects are especially noticeable for girls and children from disadvantaged socio-economic backgrounds.

The impact of pre-school on adolescents' outcomes: Evidence from a recent English cohort, Patricia Appsa, Silvia Mendoliab and Ian Walker, Volume 37, December 2013, **http://www.sciencedirect.com/science/article/pii/S0272775713001313**

This paper investigates **the importance of parents reading to their young children**. Using Australian data the authors find that parental reading to children at age 4 to 5 has positive and significant effects on reading skills and cognitive skills of these children at least up to age 10 or 11.

Reading to Young Children: A Head-Start in Life? Guyonne Kalb, Jan C. van Ours, *IZA Discussion Paper No. 7416*, May 2013, **http://ftp.iza.org/dp7416.pdf**

School System and Funding

A vast array of research continues to be published on the experience of charter schools in the US. In this issue, we highlight evidence on charter school admissions and exits, as well as the sorts of teachers that go into charter schools. Furthermore, the effects of tracking, single-sex schooling, class sizes and school size continue to be the focus of research.

Charter Schools

One concern about **charter schools** is that they will **"push out" low achieving** students. Using student level data from a large urban school district in the United States, the authors of a new paper find no empirical evidence to support the notion of push out from charter schools.

Is there Empirical Evidence Consistent with the Claim that Charter Schools "Push Out" Low-Performing Students, Ron Zimmer and Cassandra Guarino, *Vanderbilt University Working Paper,* January 2013, **http://peabody.vanderbilt.edu/docs/pdf/faculty/Zimmer_and_Guarino_Charter_School_Push_Out_Paper_NEW.pdf**

Who **leaves state controlled schools as charter schools are set up**? Using 5 years of data from Florida, the authors find that students who are performing well are less likely to leave traditional state run schools. Ethnic minority students are more likely to move to

charter schools, while special-needs students are less likely to be in charters. These findings suggest that charter schools do not “cream skim” the best students.

Choosing Charters: Who leaves Public School as an Alternative Sector Expands? Joshua Cowen and Marcus Winters, *Journal of Education Finance, Vol. 38 No. 3, Winter* 2013, **http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/journal_of_education_finance/v038/38.3.cowen.html**

Are **teachers in charter schools different to those in traditional public schools** in the United States? A new paper finds that teachers in charter schools appear more likely to exit the profession than those in the traditional public sector, while less effective teachers are more likely to leave in both types of schools. However, there are no differential relationships between effectiveness and attrition in the charter sector. Charter schools therefore do not have a higher tendency to dismiss poorly performing teachers.

Do Charter Schools Retain Teachers Differently? Evidence from Elementary Schools in Florida Joshua Cowen, *Education Finance and Policy, Vol. 8 No. 1,* January 2013, **http://www.mitpressjournals.org/doi/abs/10.1162/EDFP_a_00081**

Pupil Sorting

To what extent does **sorting students into different classes** based on prior student achievement affect future academic performance? Using a student-level data set from schools in Dallas, the authors find that sorting by previous performance significantly improves students’ math and reading scores. This beneficial effect exists for both high and low performing students.

Does Sorting Students Improve Scores? An Analysis of Class Composition Courtney A. Collins, Li Gan, *NBER Working Paper No. 18848*, February 2013, **www.nber.org/papers/w18848**

It is often hard to understand the **effect of single-sex schooling on attainment** because of socioeconomic differences between the pupils in different schools. Using data on Irish schools, the authors’ results provide no evidence that single-sex schooling reduces the gap between boys and girls. Instead, the gender differential is larger for children educated in single-sex schools than in coeducational schools.

Gender, single-sex schooling and maths achievement, Aedin Doris, Donal O’Neill, and Olive Sweetman, *Economics of Education Review, Vol. 35 pp. 104-119*, August 2013, **http://dx.doi.org/10.1016/j.econedurev.2013.04.001**

Class Sizes

This paper estimates the marginal **effect of class size on educational attainment** of high school students. The data is drawn from the Program for International Student Assessment (PISA) collected in 2003 for the United States and the United Kingdom. The authors conclude that increases in class size lead to improvements in student's mathematics scores.

The surprising effect of larger class sizes: Evidence using two identification strategies, Kevin Denny, Veruska Oppedisano, *Labour Economics, 2013, vol. 23, issue C, pp. 57-65,* August 2013, **http://econpapers.repec.org/article/eeelabeco/v_3a23_3ay_3a2013_3ai_3ac_3ap_3a57-65.htm**

This paper uses data from Norwegian elementary schools to test **whether students from disadvantaged backgrounds benefit from smaller classes**. Making use of class size rules, they find significant class size effects for the subgroup of students with parents who are educated at or below the upper secondary school level, and for the subgroup of students from dissolved families.

Disadvantaged students in the early grades: will smaller classes help them?, Jon Marius Vaag Iversen and Hans Bonesrønning**,** Education Economics, Volume 21, Issue 4, 2013, h**ttp://www.tandfonline.com/doi/abs/10.1080/09645292.2011.623380#.UsrJsLQsGqg**

School Size

A recent study examines the effects of the introduction of **new small high schools** on student performance in Chicago. Pupils at smaller schools are more likely to be disadvantaged, but they are significantly more likely graduate from high school. However, there is no positive impact on student performance in test scores. This may imply that older children are developing their non-cognitive skills rather than their cognitive skills.

The Impact of Chicago's Small High School Initiative? Lisa Barrow, Amy Claessens, Diane Whitmore Schanzenbach, *NBER Working Paper No. 18889*, **www.nber.org/papers/w18889**

Workforce

The importance of teacher quality is by now well-acknowledged. Here, we highlight a recent paper on the effect of Teacher for America, as well as two interesting studies that look at the dynamics of teacher quality and the effects of teacher experience later in their career. We also examine a study looking at increased flexibility to dismiss teachers in Chicago.

This paper examines **the effects of having a Teacher for America teacher on test scores** across the entire achievement distribution of primary school students in disadvantaged neighbourhoods. While they find that TFA teachers neither help nor hurt students in terms of reading test scores, they find positive and statistically significant effects of TFA across the math achievement distribution for the full sample and the effects are fairly uniform

The effect of Teach for America on the distribution of student achievement in primary school: Evidence from a randomized experiment, Heather Antecol, Ozkan Eren and Serkan Ozbeklik,Volume 37, December 2013, **http://www.sciencedirect.com/science/article/pii/S0272775713001064**

Little is currently known about the **dynamics of teacher performance early in their careers**. Using data from New York City, initial teacher performance is found to be quite predictive of future performance, far more so than typically measured teacher characteristics such as teachers' own test scores. Predictions are particularly powerful at the extremes; teachers who are excellent at the start of their careers are far more likely to be excellent teachers in the future than are teachers who were not as effective in their first few years.

Do First Impressions Matter? Improvement in Early Career Teacher Effectiveness Allison Atteberry, Susanna Loeb and James Wyckoff, *NBER Working Paper No. 19096,* June 2013, **http://www.nber.org/papers/w19096**

How does a teacher's quality change as they become more experienced? Using data covering all 5th grade public school teachers from North Carolina, the author finds that later career experience improves teacher quality amongst maths teachers. Moreover, he finds that the variation in teacher quality at the start of individuals' careers is twice as great as previously estimated and a pattern of negative selection where high quality teachers are more likely to exit.

The Dynamics of Teacher Quality Matthew Wiswall, *Journal of Public Economics, Vol. 100 pp.61-78,* April 2013, **http://dx.doi.org/10.1016/j.jpubeco.2013.01.006**

In 2004, in Chicago, a new collective bargaining agreement **gave principals the flexibility to dismiss teachers** with less than five years of experience. A new study finds that the policy reduced annual teacher absences by 10 percent and the incidence of frequent absences by 25 percent. Although there is evidence of modest incentive effects for young untenured teachers, the majority of the effect was due to changes in the composition of teachers in the district, This could have occurred as a result of teachers with high absence rates leaving voluntarily as a result of the policy, greater dismissal by head teachers or a change in the type of teachers who apply to schools in the first place.

"The Effect of Employment Protection on Teacher Effort", Brian A. Jacob, *Journal of Labor Economics, Vol. 31, No. 4,*October 2013, **http://www.press.uchicago.edu/journals/jole/forthcoming.html?journal=jole**

Transition to the labour market

Young people vary in their ability to make successful transitions from education to the labour market. Here, we highlight a number of recent studies looking at subject and course choice determinants. We also summarise work looking at the various factors that can affect the ability of young people to make an effective school-to-work transition, including the different experience for ethnic minorities, the effects of school exit exams, the role of professional competences and the effects of 'over-education'. Finally, we summarise two papers looking at the returns to qualifications across different countries and whether there are externalities from having large numbers of STEM college graduates

Subject and Course Choice

Undergraduates' **choices of subjects** to study at university have **implications for labour market outcomes**. In England students bearing the full financial burden of undergraduate tuition may focus more on subjects which increase their 'employability'. In a new study, the authors find that males and members of certain non-white ethnic groups are more likely to choose 'high wage-premium' subjects. However, students from lower income households are less likely to choose high wage premium subjects.

Labour market motivation and undergraduates' choice of degree subject, Peter Davies, Jean Mangan, Amanda Hughes, Kim Slack, *British Educational Research Journal, Vol. 39, No. 2, pp. 361–382*, April 2013, **http://onlinelibrary.wiley.com/doi/10.1080/01411926.2011.646239/abstract**

The teaching environment of mathematics may be an important reason why **females are underrepresented in advanced mathematics courses** and math-based careers. The authors argue changing the learning environment towards fostering, identifying and attracting girls with high math qualifications would increase the number of females taking maths courses. They find a more flexible curriculum substantially increases the number of female students acquiring more advanced math.

Math and Gender: Is Math a Route to a High-Powered Career? Juanna Schrøter Joensen, Helena Skyt Nielsen, *IZA Discussion Paper No. 7164*, January 2013, **http://ftp.iza.org/dp7164.pdf**

The **gender composition of classmates in secondary school** may have important effects on educational and labour market outcomes. Using data from Milan, the authors find that the gender ratio of peers in high school significantly affected the choice of subject at university. A large percentage of same-sex high school classmates increases the likelihood of choosing a "high earning" degree (such as Economics, Medicine or Engineering).

The Long Run Effects of High-School Class Gender Composition, Massimo Anelli and Giovanni Peri, *NBER Working Paper No. 18744*, January 2013, **www.nber.org/papers/w18744**

School-to-work transition

With a number of proposed changes to GCSEs in the coming years, it is informative to consider evidence from US states that have changed their exams. This study analyses the effects of different high school exit exams on graduation, incarceration, employment and wages. Exams assessing academic skills below the high school level have little effect. More challenging standards-based exams reduce graduation and increase incarceration rates. However, the authors find no consistent effects of exit exams on employment or the distribution of wages.

The Effect of High School Exit Exams on Graduation, Employment, Wages and Incarceration Olyesa Baker and Kevin Lang, *NBER Working Paper No. 19182*, June 2013, **http://www.nber.org/papers/w19182**

The **transition to the workforce may be affected by professional competencies** as well as formal qualifications. Using data on Spanish students, a new paper demonstrates that individuals who have best developed the competencies that firms value, such as teamwork, motivation and problem solving, are more likely to obtain a job. The most relevant competencies are transferable personal competencies.

Graduate competencies and employability: The impact of matching firms' needs and personal attainments, Aedin Doris, Mercedes Teijeiro, Paolo Rungo and M Jesus Freire, *Economics of Education Review, Vol. 34 pp. 286-295*, June 2013, **http://dx.doi.org/10.1016/j.econedurev.2013.01.003**

With high rates of unemployment, some young people leaving education may **enter jobs for which they are overqualified** or "overeducated." A new paper suggests that those who do so are significantly less likely to end up in jobs suited to their education. This implies that policies that encourage entering work should take account of the possible long term costs of inadequate job match.

Overeducation at the start of the career: Stepping stone or trap? Stijn Baert, Bart Cockx, Dieter Verhaest, *Labour Economics, forthcoming*, **http://dx.doi.org/10.1016/j.labeco.2013.04.013**

Returns to skills and qualifications

Analysis of the new PIAAC survey of adult skills over the full lifecycle in 22 countries shows that, on average, a one-standard-deviation increase in numeracy skills is associated with an 18 percent wage increase among prime-age workers. But this masks considerable heterogeneity across countries. Eight countries, including all Nordic countries, have returns between 12 and 15 percent, while six are above 21 percent with the largest return being 28 percent in the United States. Returns to skills are systematically lower in countries with higher union density, stricter employment protection, and larger public-sector shares.

Returns to Skills around the World: Evidence from PIAAC, Eric A. Hanushek, Guido Schwerdt, Simon Wiederhold and Ludger Woessmann, IZA Discussion Paper No 7850, December 2013, **http://www.iza.org/en/webcontent/publications/papers/viewAbstract?dp_id=7830**

This paper uses the 2009-2011 American Community Survey to examine the external effects of college graduates in STEM and non-STEM fields on the wages of other workers in the same metropolitan area. They find that both types of college graduates create positive wage externalities, but STEM graduates create much larger externalities.

STEM Graduates, Human Capital Externalities, and Wages in the U.S, John V. Winters, IZA Discussion Paper No 7830, December 2013, **http://www.iza.org/en/webcontent/publications/papers/viewAbstract?dp_id=7830**