Teaching in The Bronx

Understanding schooling, youth aspirations and imagined futures in London and New York City

PLUS Understanding baby talk | Bringing local neighbourhoods to life
Hello and welcome...

...to the Autumn 2015 edition of Research Forum, the magazine showcasing research excellence at Oxford Brookes University.

In this edition we lead with a fascinating insight into the research by one of our senior lecturers in the School of Education who is investigating the lives of young people in an inner city high school in The Bronx, New York. His research allows for interesting comparisons between US and UK experiences of schooling and the transition into higher education, particularly for students significantly disadvantaged.

From New York to closer to home we take a look at a digital storytelling project, undertaken in Oxfordshire’s Blackbird and Greater Leys neighbourhoods, that’s helping to better understand the role of participatory arts as a catalyst for change in community development.

We also catch up with the Brookes BabyLab to find out all about their new BabyWordTracker App, a revolutionary tool which allows parents to track the vocabulary development of their infants. Finally we discover how researchers in our Business School are impacting Government policy on student attainment in the higher education sector.

I hope you enjoy reading this edition of Research Forum and as always we welcome your comments and suggestions, so please get in touch via researchforum@brookes.ac.uk

Professor Linda King
Pro Vice Chancellor Research and Global Partnerships

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Leverhulme funds research with the potential to reduce global warming

The Leverhulme Trust has awarded three Oxford Brookes scientists, Deborah Pearce, Chris Hawes and Verena Kleichauber, with £114k to fund research which has the potential to reduce global warming by lowering methane emissions from rice.

Methane is produced in vast quantities by rice paddy fields and this greenhouse gas has an impact on global warming which is twenty-times higher than carbon dioxide. The two-year project will test whether it is possible to turn methane into carbon dioxide in plants in the model plant tobacco, using an enzyme which would detox the plant and produce methanol – a by-product which can enhance plant growth and produce biomass or even biofuel.

If successful, the research could have a globally significant impact on sites with soil which is high in methane, from rice paddy fields to wetlands and ex-landfill sites. It would enable the world’s growing population to feed their children without poisoning the planet.

The Oxford Brookes team is joined by Professor Tom Smith at Sheffield Hallam University.

Wildlife conservancies in the Maasai-Mara

Over the last four years Professor Stewart Thompson, PhD student Laura Doughty and the University’s Spatial Ecology and Landuse Unit (SELU) have successfully worked in the Mara ecosystem to help better identify and quantify changes that take place as a result of changes to management strategies in wildlife conservancies.

Conservancies are a community – led initiative to promote the protection of wildlife in conjunction with private investors.

To date, their contribution has been to begin to assess changes as a result of the reduction/removal of cattle and to determine the spatial and population response from the wildlife as a consequence. Thanks to generous funding from the Patsy Wood Trust and Sir Martin and Lady Audrey Wood via the Charities Aid, SELU will be continuing their work for the next two years providing detailed ecological and environmental monitoring and modelling as an evidence-based approach to conservancy advocacy into the future.

Wild chimpanzees drink alcohol using leafy tools

Research by an Oxford Brookes academic and a team of international scientists has found that chimpanzees drink alcohol using leafy drinking vessels. The paper, by Dr Kimberley Hockings was published in June by the Royal Society in their journal, Royal Society Open Science.

Wild chimpanzees in Bosso in the Republic of Guinea, West Africa, harvest fermented palm sap from the raffia palm using elementary technology – a leafy tool as a spongy drinking vessel. This absorbent extractive tool is dipped into the opening of the fermented palm sap container, then retrieved and put into the mouth for drinking. All age and sex classes ingested the fermented sap and some of the chimpanzees consumed high quantities of alcohol.

The new research was headed by Professor Tetsuro Matsuzawa of the Primate Research Institute at Kyoto University, Japan and it provides the first empirical evidence of repeated and long-term ethanol ingestion by apes in nature.
Addressing the housing crisis

Researchers at Oxford Brookes University and the University of East London have published a major report for the Joseph Rowntree Foundation on how we can deliver more affordable housing in England. Led by Dr Sue Brownill, Reader in Urban Policy and Governance in the Department of Planning, the team researched the role of planning obligations in meeting the housing needs of those on lowest incomes.

Planning obligations, or Section 106 agreements as they are often called, are agreements secured between local councils and developers during the granting of planning permission. The research found that the number of homes provided nationally through Section 106 halved between 2006/07 and 2013/14 from 32,000 (65 per cent of all affordable homes) to 16,193 homes (37 per cent of all affordable homes).

Given the estimated need of 83,000 homes per year in the social rented sector, the level of unmet need is significant. The report revealed that volatile housing markets and changes to the planning system, such as revised definitions of affordability in planning legislation and the increased use of mechanisms to appraise the financial viability of housing schemes, have contributed to this decline.

Six case studies also revealed a variety of alternative schemes, have contributed to this decline. These findings indicate that the northern giant mouse lemur has the biggest testicles in relation to their body mass amongst primates.

Research supports businesses through the war on terror

A book co-authored by an academic from the Department of Marketing was featured in the TV programme ‘Going Underground’ on Russia Today TV on 27 July 2015. The newly published book, The Private Security State – Surveillance, Consumerism and the War on Terror co-authored by Dr Ana Canhoto aims to help businesses prepare for the challenges faced with the governments new requirements for businesses to support national security programmes.

Prosthetic hands, robot trousers and biosensors - £5.3 million for healthcare tech research

A prosthetic hand controlled by the nervous system, robotic clothing to help people with walking and biosensors to monitor how patients use equipment or exercise during rehabilitation are the focus of three research projects awarded £5.3 million by the Engineering and Physical Sciences Research Council (EPSRC). The three innovative research projects started work in the spring and are led by Newcastle University, the University of Bristol and the University of Warwick working with 15 university partners, including Oxford Brookes.

Prevention of torture research presented at the Foreign Office

Senior Lecturer in Human Rights and Governance, Richard Carver, spoke at the Wilton Park conference in March where he presented the initial findings of his research into the prevention of torture. The conference gathered international decision-makers to hear the findings on behalf of the Foreign and Commonwealth Office.

Commissioned by the Association for the Prevention of Torture, Dr Carver led a three-year international study to determine whether existing torture prevention measures work and what can be done to reduce the risk of people being tortured.

Research teams in 12 countries across the world have been gathering data on their history of torture prevention measures and torture incidence. These findings will be added to the data that the core research team gathered in four pilot studies in 2013. The final results of the research will be published next year.

Biology grants will investigate evolution in the natural world

Professor Alistair McGregor has been awarded almost £700k to carry out two projects which will investigate the evolution of animal diversity. Grants from the Biotechnology and Biological Sciences Research Council (BBSRC) and Natural Environment Research Council (NERC) will fund the projects which will study the eyes and sexual organs of fruit flies in order to understand their evolution and the genetic changes that drive animal evolution more broadly.

The project funded by the BBSRC has the potential to reveal new insights into diseases such as cancer by examining how fruit fly eyes evolve. The NERC-funded project seeks to study gene variation in fruit fly genitalia and how sexual selection acts on genetic components to change development and potentially reinforce isolation between species, and add to our general understanding of biodiversity.

Climate change catastrophes and the effect of ambiguity

Dr Sara le Roux, Senior Lecturer in Economics at Oxford Brookes is carrying out a research project into whether ambiguity affects individuals’ decisions to insure themselves against catastrophic effects of climate change.

There is very little research in this area, and the study will aim to find out how individuals respond to the availability of an insurance that would give them immunity to a climate change catastrophe. Moreover, if such insurance is available to them, do they insure themselves sufficiently? Dr le Roux is also investigating the policy implications for insurance companies, looking at whether an increase in the availability of information regarding the probability of such a catastrophic event, leads to an increase in insurance subscriptions.

The project is expected to run until August 2016.
Research carried out by Professor Margaret Price and Birgit den Outer, Researchers in the Assessment Standards Knowledge exchange (ASKe) Pedagogy Research Centre at Oxford Brookes, is influencing Government policy on student attainment in the higher education sector.

Primary pupils’ science attainments are improved with creative lessons

A research project led by an Oxford Brookes academic, together with Science Oxford, has found that delivering creative and challenging lessons to primary school children improved their attainment in science by the equivalent of three months learning.

The project took place over a year and involved 1500 Year Five pupils across 42 schools in Oxfordshire. The programme provided five professional development sessions for two teachers from each school. The teachers were enabled to deliver science lessons that included more creative investigations, class discussions and asking big questions to challenge thinking.

The evaluation report titled Thinking, Doing, Talking Science has been published by the Education Endowment Foundation.

Honey is a sweet treat for chimps

Newly published research by Dr Matthew McLennan from the Department of Social Sciences at Oxford Brookes has found that wild chimpanzees eat honey as a ‘fall-back food’ during lean months when forest fruit is in short supply.

Chimpanzees were observed in Bulindi, Uganda over a period of 22 months and were also found to make stick tools to help them dig out underground bee nests to get to the honey and larvae.

The research found that honey-feeding by the chimps was unrelated to peaks in flowering, when a diverse range of nectar and honey sources are available to bees and when local people harvest beehives. Instead, the chimps ate more honey when less fruit was available and when they ate less fruit overall. The research has been published in the American Journal of Physical Anthropology.

Identity is related to wellbeing in older age

Research findings on memory and the self in ageing have been published in the psychology journal Consciousness and Cognition. The Economic and Social Research Council funded research, led by Dr Clare Rathbone, aimed to examine the relationships between memory, identity and wellbeing in younger adults, compared to older adults.

The results found that in older adults, forgetfulness did not relate to wellbeing. Thus, having trouble remembering did not mean people felt unhappier in life. There was however a strong relationship between wellbeing and having a positive view of one’s own identity.

These results will help to pave the way for future research aimed to support wellbeing in ageing. This study is part of a programme of work that began in October 2012 when Dr Rathbone was given funding of £139,301. The study concluded in September 2015.
Back in 2009, a question about the equivalence of degrees from Oxford Brookes University and the University of Oxford was asked at the former Innovation, Universities, Science and Skills Select Committee’s (now the Science and Technology Committee) entitled Students and Universities.

It is a question we, at the ASKe Pedagogy Research Centre, have been debating ever since. People both inside and outside the sector take differing perspectives on the importance of this question and the “right” answer, but a common response claims a reliance on the UK system of external examining to address the issue of equivalence.

This system requires all universities to appoint qualified, experienced examiners from outside the institution to offer advice on academic standards of awards, programmes and/or modules and to assess how academic standards in student work compare with other universities. Our recent research has meant that the role of external examining and the issue of equivalence are now in the sights of Jo Johnson, the Minister of State for Universities and Science, for inclusion in the upcoming green paper which will set out Government policy and planned changes to higher education in England and Wales.

In a speech, “Teaching at the heart of the system delivered on 1 July 2015 at Universities UK, London he said: “I want the green paper to look at the role that external examiners play in underpinning standards and ensuring our grading system provides a clearer, more comparable picture of student attainment.”

In early November 2015, the Government published their Higher Education Green paper proposing wide-ranging changes to the structure and operation of the sector’s regulatory architecture. The role of the external examiner is likely to be part of ongoing discussions about ensuring quality in higher education which would become the responsibility of the new Office for Students (OfS).

The minister’s speech in July drew on two of our research projects.

In late 2014, the Higher Education Funding Council for England (HEFCE), in conjunction with other UK funding councils, funded a review to “check the health” of the external examining system. We were invited to be part of that review because of successful work we had already undertaken for the Quality Assurance Agency and the Higher Education Academy looking at external examiners’ understanding and use of academic standards.

In that project we looked at the way external examiners make judgements about the quality of student work. The project covered four diverse disciplines and revealed a lack of consistency of judgements between external examiners within each discipline and a lack of clarity about the role of the external examiner.

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In addition, it concluded there was a noticeable shift from external examiners as arbiters of standards to checkers of assessment processes used in the awarding institutions.

This project informed the initial stages of the major review of Quality Assessment by HEFCE, and our review of the external examining system was timed to underpin the major review’s second stage sector - wide consultation, held in the summer of 2015.

Our review:

- conducted a survey in which over 600 external examiners and over 100 quality officers participated
- considered theoretical perspectives on safeguarding standards and maintaining the confidence of stakeholders
- gathered information about other approaches to this from around the world
- held in-depth interviews with a selection of examiners and quality officers and
- held regional opportunities to explore issues with stakeholders across the sector.

This varied but substantial dataset provided a picture of the complex and competing aspects of the external examining system and, when brought together, produced a picture of its strengths and weaknesses.

Our participants were clear that the system offers some degree of externality to higher education assessment processes, a ‘critical friend’ role, sharing of good practice in the spirit of collegiality and the development of academic staff. However, the issue of comparable academic standards is problematic, and we found little evidence that external examiners are an effective means to safeguard academic standards across the sector. It also highlighted the impact on grade inflation across the sector and the role of changes to algorithms used by universities to calculate their students’ final honours classifications. The green paper described as urgent the need to address this.

In the end, we came to the conclusion that although the external examining system has a strong symbolic and reputational power, this power has a fragile foundation.External examining risks losing its symbolic power if changes in higher education apply greater pressure to the system and expose its shortcomings.

So what should be done now? Do we abandon a system that has a long history and is admired internationally? Look for an alternative that could provide that important external oversight of student work and awards made by universities?

In recognition of its popularity and in the absence of a viable alternative, we recommend that the system be revised in the following ways:

- introduction of an appointment system that is independent of the individual providers
- rebalancing the role to emphasise evaluation of quality of student work across a range of institutions over the processes of assessment
- focus on comparability and equivalence at the discipline level
- a professionalisation of the role through training and an expectation of active participation in disciplinary communities in order to establish a shared understanding of standards.

Now, we wait with interest to see how many of our recommendations are adopted by the Government.

Professor Margaret Price and Brigit den Outer both work in the Business School. Their work was in collaboration with Emeritus Professor Chris Rust and Research Assistant Jane Hudson as well as Professor Sue Bloxham from Cumbria University and Geoff Stoakes from the Higher Education Academy.

The ASKe Pedagogy Research Centre is based in the Faculty of Business. For more information visit their website at www.brookes.ac.uk/aske
Patrick Alexander, Senior Lecturer in Education on understanding schooling, youth aspirations, and imagined futures in London and New York City.

Picture a 17 year-old girl who was shot in the head at a freshman party, now wheelchair-bound, struggling to graduate. A young Latino man with ‘Game Over’ tattooed on his eyelids, leaving his gang affiliations behind to focus on schooling. A hard working, smiling, first generation migrant teen from Ghana, on his way with a full scholarship to a prestigious private American university. Middle class kids from relatively stable families, pursuing a well-known but increasingly fragile version of the American Dream that leads from college to job satisfaction and security in the future. Picture an immense, castle-like structure in The Bronx, where these people exist together, carving out aspirations and imaginings of their distinct but interconnected futures amidst the pulsing, chaotic, inspiring, roaring mechanism of New York City.

This is a list of just a few of the incredible individuals who I was fortunate enough to meet as part of my experience as a Fulbright Peabody Scholar conducting anthropological research into aspirations and schooling in New York City during the academic year 2014-2015. As an anthropologist of education, I am particularly interested in the ways in which schooling serves to socialise young people (and eventually, older people) into particular practices and ways of thinking. With this in mind, in this research I was especially interested to explore comparatively the ways in which schooling shapes the aspirations and imaginings of the future held by those at the very end of formal secondary education. I wanted to ask high school seniors what they wanted to be when they grew up and then to unravel the complex set of sociological factors that led them to aspire to particular imaginings of the future. I also wanted to know about the barriers to achieving their aspirations for the future, and the strategies and supports that they used in order to overcome (or not overcome) these barriers. In short, I wanted to better understand in comparative relief what young people in contemporary British and American society consider to be the building blocks of a meaningful life; and I wanted to understand why they think this way. These are issues at the heart of much political and popular discourse in the UK and the US. I wanted to better understand why certain futures are privileged and articulated through experiences of schooling, and how these may be similar and different in the post-recession realities of everyday school life in the US and the UK.

In order to do so, during 2014-2015 I spent several days each week spending time with seniors and their teachers at a school I call Bronx High School. By adopting this classic ethnographic methodology of socio-cultural anthropology, I hoped to immerse myself in the everyday life of the school, documenting mundane, cumulative, momentary...
Students must also navigate the contested nature of the futures imagined for them by (and in relation to) the relative futures of the school, the City, or broader US society.

In June 2014, as I attended the high school graduation ceremony for seniors at Bronx High (including some of those mentioned above), I had cause to reflect on the truly profound impact that my Fulbright experience had on me, both personally and professionally. I learned a lot from the gracious, welcoming high school seniors and teachers who allowed me into their lives during the school year.

This was not only in terms of their particular articulations of aspiration and the future, but also in terms of developing a critical perspective on the broader concept of aspiration as it is understood and articulated in late modern capitalist societies like the UK and the US. Adopting this kind of critical approach is crucial not only in helping young people to overcome risks and develop resilience in achieving their aspirations, but also in helping them to challenge the more profound level the terms in which these aspirations are framed.

For more information about research from the School of Education visit the website education.brookes.ac.uk

One of the most anticipated moments for parents is when their babies start to say their first words. After months of waiting, and some not very clear attempts, the exciting and precious moment arrives; getting to that point however, is a lot more complex than you might think...

Before infants are able to understand a word, they have to deal with a huge amount of information in order to learn the properties of their native language. Among other skills, infants have to identify the relevant sounds of their native language to form a repertoire. They also have to learn the rules governing those sounds; for example, which sounds can be combined and which ones cannot. In parallel, infants have to discover what is and what is not a word-like unit and to associate all those possible word-like units to a particular meaning. This process is known as word learning.

Word learning is a two-step process; on one hand it requires a person to associate a sound sequence with its meaning, this is word comprehension. On the other hand, it requires the person to start vocalising that sound sequence to make reference to that given meaning; this is word production. There is evidence to show some word comprehension can start as early as five months of age.

At five months, infants recognise >
their own name, and at six months they can link the words “Mummy” and “Daddy” to their own parents. They can also understand some words that are very common in their environment such as toys, food and words related to body parts. However, it is not until their first birthday that babies start producing their first words.

Our new BabyWordTracker is an application for mobile devices that has been specially designed to track the comprehensive and productive development of infants’ vocabulary. This application has been developed in conjunction with our University’s IT team, Oxford Brookes Information Solutions (OBIS). The app is available on app stores for free.

Parents can track the vocabulary development of their young children using this new app. Once their baby begins producing and/or understanding words, they can record this information in real time. Parents are then able to view a range of statistics about their child’s word learning, for example, the number of words over time (per week, month overall), the number of words per category (e.g. animals, toys, food). This interactive interface allows parents to really treasure their infants’ first words.

Parents of bilingual/trilingual babies can also use the app to track the development of their infants. It covers sixteen different languages, including some of the most common such as German, French, Italian, Arabic and Mandarin, and ones that are not so common such as Swedish, Hebrew, Czech and Japanese.

Until now, the study of infants’ vocabulary development has been done using either vocal recordings or parental questionnaires. Although both of these methods have been very useful and provided us with valuable information, these techniques only allow us to know the amount of words that a baby knows at a specific moment. We do not know enough about the vocabulary trajectory of a baby.

Our BabyWordTracker will help us solve this problem because the information can be collected in real time. This means that we should be able to know the exact date when a baby started producing a given word, allowing for analysis of the vocabulary trajectory of each infant.

The information that parents enter into the app will be uploaded regularly to our database via secure means. It will be of huge interest to the research community and copies (containing no personal or identifiable information) will be made available to any interested academics, to help further the understanding of how infants’ vocabulary develops.

Brookes BabyLab investigates current issues in developmental psychology, studying how children learn about the word around them. If you want to be a part of the making of science, you can register your child (from 0 months to five years) to participate.

Dr. Nayeli Gonzalez-Gomez works in the University’s Department of Psychology, Social Work and Public Health. More information about the department is available on the website [http://pswph.brookes.ac.uk](http://pswph.brookes.ac.uk).

Contact the Brookes BabyLab team:
- 01865 483676 (voicemail)
- babylab@brookes.ac.uk
- www.brookes.ac.uk/babylab

By 18 months of age, infants are able to produce about 10 words, but they are able to understand over 30. Just a few months on, by their second birthday, babies understand almost 100 and they are able to produce almost 70 different ones.
Digital storytelling:
Bringing local neighbourhoods to life

Jeni Burnell, Research Associate in the Centre for Development and Emergency Practice (CENDEP) on the storytelling project helping to enable a greater understanding of Oxford’s cultural heritage.

This summer I have been working with filmmakers StoryWorks UK in the Blackbird and Greater Leys neighbourhoods in Oxford. We have been recording local people’s stories, past and present, to create a series of digital stories that share the unique heritage and character of the estate.

I developed the storytelling project, known as Time to Talk: Digital storytelling in the Leys with StoryWorks UK, the Museum of Oxford, Oxford City Council and the Leys Community Development Initiative. It received a Sharing Heritage grant from the Heritage Lottery Fund in early 2015.

A digital story is a short film approximately two – three minutes long told in the first person that, when combined with photographs and video footage, shares personal insights about people and their life experiences.

With ties to the car manufacturing industry, the Leys contribute significantly to Oxford’s manufacturing heritage. Storytelling projects give people a chance to tell their story in their own words. The stories shared in the Leys have been fascinating. Many of the people we spoke with have lived on the estate since it was built. They talk about working at the nearby Pressed Steel factories and of the estate’s active social life.

This includes memories of The Singing Estate, a popular, four part documentary series on Channel 5 back in 2006, where renowned conductor Ivor Setterfield took 40 amateur singers from the Leys estate and turned them into a choir.

My research work explores how small, practical and low-budget interventions, such as community art projects, can bring about bigger, long-lasting change in neighbourhoods. This international development approach is known as ‘Small Change’ and has been developed by Oxford Brookes’ Emeritus Professor Nabeel Hamdi. In his book Small Change: About the Art of Practice and Limits of Planning in Cities Professor Hamdi explains that, “...to achieve something big, start with something small, and start where it counts.” This way of working can have contributed to the project.

I look forward to sharing these stories with others and celebrating the Leys unique contribution to Oxford’s cultural heritage.

For more information about CENDEP and the School of Architecture visit the website http://architecture.brookes.ac.uk/research/cendep/