

Royal Society of Edinburgh's *Young Academy of Scotland*

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Wednesday, 11 March 2015

Submission of consultation notes to The Education and Culture Committee

'Education and attainment gap' in Scotland: Session 2 Role of Third and private Sectors

A response on behalf of **Royal Society of Edinburgh's *Young Academy of Scotland* (RSE YAS)** for consultation on the role of the third sector and the private sector in improving attainment and achievement for all school pupils, particularly those whose attainment is lowest

Specifically,

- the scale of the third and private sectors' involvement in schools, in terms of improving attainment and achievement, and the appropriate dividing line between their role and the role of education authorities;
- Whether their approaches have been particularly successful in improving achievement and attainment for school pupils. If so, whether their methods could be more embedded in the curriculum;
- whether the full potential of the third and private sectors in helping to improve children's attainment and achievement is being realised;
- how successful schools have been in reporting on pupils' wider achievements (i.e. not just examination results) such as those the third sector helps to deliver. Whether such achievements are valued by parents, employers and learning providers as much as formal qualifications;
- given the strong policy focus on the early years, whether the third and private sectors have been able to work equally effectively with pupils of all ages.

Note:

The authors would be happy to contribute in further detail at the follow-up focus meeting at the Committee's request.

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1.0 The Opportunities for the Third Sector

1.1 Poverty and the achievement gap

Much research has demonstrated the critical link between poverty, educational attainment and achievement, which significantly impacts on children's opportunities and outcomes into adulthood. The so-called 'achievement gap' between children from poorer backgrounds and their more affluent peers is a major factor in hindering social mobility in Scottish society. Currently, 1 in 5 children in Scotland or 220,000 children live in poverty, many in households in which at least one adult is working (McKendrick, 2014). Evidence from the *Growing up in Scotland* study (Bradshaw, 2011) shows a clear link between children's social class and their educational achievement from the youngest age. At age 5, compared with children whose parents have no qualifications, those with a degree educated parent are around 18 months ahead on vocabulary and 13 months ahead on problem-solving ability. At the age of 3, children whose parents have low or no qualifications, are already behind their more advantaged peers in terms of social and emotional development. Furthermore, the gap between children in the top and bottom social classes is getting wider as children grow older. These findings suggest that before children enter school, their chances of achieving well academically and securing well paid employment later on in life are already substantially different, depending on the social class they were born in.

Differences in parents' education and disposable income also mean that, for children of school age, extra-curricular activities after the school hours or during holidays vary. More affluent children are again at advantage, as their parents can afford culturally and educationally enriching activities after school, such as visits to museums, sports activities or other leisure (Horgan, 2007). Support through involvement of parents in completing homework are more common in middle class families (Crozier and Reay, 2005) and homes become thus a natural extension of the school activities. At community level, areas of deprivation are often blighted by limited play spaces, unsafe parks and poor quality services. These discrepancies in the quantity and quality out-of-school activities children can afford and are available locally mean that educational opportunities that children from different social backgrounds have outside school are remarkably different.

Parents also differ in their aspirations and attitudes in relation to the value of education, often linked to their own experiences of education and educational achievement (Goodman and Greg, 2010). Research shows that middle class parents are more likely to demand good quality services and participate in school activities, while lower class parents feel less confident to do so (Crozier and Reay, 2005). This is despite the fact that parents and children of all social classes believe in the

importance of education and the opportunities it offers. Parents from poorer backgrounds, however, perceive the multiple barriers that get in the way of their children's success to be strong limiting factors (Sime and Sheridan, 2014).

The issues described above may explain why the academic attainment of poor children at secondary school is much lower than that of their more affluent peers. In Scotland, for example, in the exams children take in their 4th year at secondary school, at the age of 15-16, the scores of children living in the most deprived areas are almost half of the tariff scores of children living in the least deprived areas (130, versus 238). Thus, children from more disadvantaged areas do less well academically and poverty is for many children the source of their academic underachievement. Low achievement has also an ethnic dimension, with certain ethnic groups (for example, Roma and Gypsy Travellers) scoring considerably worse in exams than other ethnic groups. Roma and Gypsy Travellers are also more likely to report incidents of bullying and racism at school. However, other ethnic minority groups, like Indian and Chinese children, do much better than all other groups, including White children, which suggests that ethnicity on its own is not a risk factor.

After young people leave school, the inequality in educational achievement leads to long-term limitations in terms of other opportunities, such as going into higher education or finding well paid employment. On average, poor children are more likely to leave school early and with no qualifications than their better off peers (Scottish Government, 2011b). Within the OECD countries, Scotland has one of the highest proportions (about 13%) of young people in the 15-19 age group not in education, training and employment (the so-called NEET group), with most of them coming from deprived backgrounds and having no qualifications. No overall progress has been made in the last decade in reducing the number of the 'more choices, more chances' (MC2) group, as they are known in Scotland (McKendrick, 2014). This also means that in terms of access to higher education and better employment prospects, children from better off families are again at advantage.

1.2 Some limitations of the education system for learning

Determinants external to the education system evidently have a significant contribution to the educational outcomes of young people and yet it is these very variables that the education system is relatively powerless to manipulate. The variable nature of the quality of teaching and learning in schools has received much attention and comment in the academic literature (e.g. Claxton, 2011), as have the curricula macro-structure and content of education (e.g. Peal, 2014; Mortimore, 2014).

Guy Claxton (2011) argues that the traditional model for educational systems, that of developing basic knowledge areas and predetermined competences along with leadership traits and morality, has been largely superseded by the 'character curriculum': "...countries around the world have recast the aims of their curriculum in terms of desirable skills and traits" *for learning*. This is particularly relevant in Scotland with the phased introduction of the *Curriculum for Excellence* and its implications for both classroom teaching and assessment at a national level. The *Curriculum for Excellence* explicitly states that the curriculum should promote the 'value of learning' and 'promote high aspirations and ambition' for its pupils, yet the mechanisms to achieve this in disadvantaged areas remain unclear.

Such structural changes to education cannot hope to redress the disparity caused by social inequality and the direct implications for young people's learning. Some of the most notable implications of socioeconomic deprivation, other than the direct material limitations for schooling, include parents' lack of knowledge, skills and confidence in supporting their children's learning; young people's lack of opportunities in deprived areas for engagement in educational enrichment and extra- or super-curricula education; families' limited social, economic and cultural capital more generally and the 'know-how' to support young people in reaching positive destinations; disillusionment with education as a means to be 'tested' or 'assessed' (Audit Scotland, 2014). The outcome of these characteristics is low-level engagement and investment in education by those without the cultural capital to support it. As White (2007) notes "it [is] difficult for many children not from a middle-class background to adjust to a highly academic school culture". The net effect of this maladjustment is often an attritional relationship with schools and teachers, that serves to provide a long term negative feedback in educational outcome.

1.3 What do we know about interventions that work in tackling the attainment gap and is there scope for increased third and voluntary sector involvement?

Closing the attainment gap for Scotland's most disadvantaged children and young people is crucial to ensuring a more equal and fair society. However, the solutions and interventions that can lead to this are not straight forward, and interventions advocated by successive Governments are not always supported by evidence. A close examination of the London Challenge initiative, for example, shows 'a complex mix of successes, missed opportunities and variable impact' (Chapman, 2015).

Some of the approaches for which the evidence indicates more convincing results in helping overcome disadvantage include:

- *Leadership and highly trained staff*

Investment in school leadership in disadvantaged areas and highly trained schools staff, preferably at Masters level, has been shown to translate into increased aspirations for children and young people's attainment, more sustained and evidence-based interventions, teacher effectiveness and increased changes of overcoming disadvantage. Effective leaders have also been shown to work more successfully with community planning partnerships, local agencies and businesses to improve young people's access to opportunities and address families' needs more holistically (Hutchings *et al.*, 2012). In this sense, there is scope for third sector collaboration and involvement in schools, for example, through models of successful leadership which could have transferable elements to schools and mentoring of school leaders.

- *Incentivising schools to take in pupils from disadvantaged families*

Given that children and young people from disadvantaged backgrounds are more likely to be faced with complex barriers to learning, schools must be recognised for their substantial efforts in supporting children and families overcome disadvantage and engage successfully in learning. Investments such as a *pupil premium* fund which takes into account the number of children identified as coming from deprived backgrounds would provide schools with incentives and support required to develop interventions required. Reviews of successful initiatives show that all successful programmes were accompanied by targeted funding (Sosu and Ellis, 2014). The model of 'catchment area' recruitment currently promoted in Scotland has become divisive in many areas, as 'good' schools acquire a good reputation which trigger increased house prices in the area and thus lead to socio-economic segregation by place and postcode. Given the expertise and resources available in the third and voluntary sector, there is scope for schools to develop more sustained links with other organisations and increase sources of funding and partnership working to better support the most disadvantaged pupils.

- *Funding and giving schools freedom in using this for tailored interventions*

Context-specific, intensive interventions, which take into account individualised and localised needs have been shown to produce results in terms of helping tackle underachievement (Hutchings et al., 2012; Sosu and Ellis, 2014). These are not always transferable and generalised interventions may be counter-productive and resource-intensive. Schools should be supported in developing their own interventions, tackled at their own population needs and building on local strengths and resources. In this sense, third sector partners might be interested in sponsoring interventions or working with schools to pull expertise and resources to develop tailored initiatives.

- *Engaging parents early and whole-family approaches to learning*

Despite some interventions aimed at raising pupils' and parents' aspirations, evidence is not convincing that initiatives aimed solely at tackling aspirations work. Parents and young people do not lack high aspirations, even when living in poverty. What they often need is increased confidence in their own skills and 'know-how' on supporting their children's learning, for example, by reading and engaging in literacy activities together, making learning enjoyable from a young age and talking about learning as a positive feature of family life. Given the time and commitment required in gaining families' trust and building confidence, there is clear scope for more involvement from third and voluntary sector in developing joint family programmes with schools to target interventions early and at the most vulnerable and prevent the need for complex interventions later on.

- *Giving parents confidence and skills in supporting their own children*

Evidence suggests that interventions aimed at raising parents' and children's aspirations or changing parenting styles do not work in isolation. The vast majority of parents do not lack high aspirations, but they learn to adjust their children's and their own expectations when confronted with difficult socio-economic circumstances (Sime and Sheridan, 2014). As parents from disadvantaged backgrounds often report poor experiences of schooling and low confidence in their own skills to support their children's learning (Ghate and Hazel, 2004; Crozier and Reay, 2005), working with parents from early on to engage them in learning activities with their children can lead to increased confidence and more positive attitudes towards learning activities. There is clear scope here for collaboration with voluntary sector organisations, especially those with expertise in supporting families in a non-formal environment.

- *Challenging teachers' attitudes and support their motivation to raise attainment*

It is important that teachers' own attitudes are challenged when it comes to successes expected in areas of deprivation. The focus on improving teaching and learning at all levels should take into account teachers' own core beliefs and understandings on how poverty impacts on children's and families' ability to engage with formal education. Judging and stereotyping families and young people is often reported as a major cause of disengagement by both young people and parents. Opportunities for teachers to engage in relevant training and joint programmes with third and voluntary sector organisations could be created through co-funded programmes and better mechanisms for sharing skills between sectors.
- *Interventions to support young people's social and emotional learning*

Often, young people from disadvantaged backgrounds report social, emotional and behavioural (SEB) issues, which can pose significant barriers to learning. Initiatives such as counselling in schools, 'nurture' groups or mentoring can help young people overcome the significant challenges that SEB issues can pose when engaging in learning. With limited funds for targeted support in schools, for example through initiatives such as 'nurture classes', there is scope for more sustained involvement of volunteers and charitable organisations to support young people in and out of school and increase their resilience and self-confidence, to put them in a better position to achieve.
- *Mentoring for young people, as a source of role models and information on routes to higher education and other positive destinations*

There is some evidence that mentoring, especially by highly trained, experienced mentors, can help young people overcome barriers and challenge lack of confidence or self-doubt (Cummings *et al.*, 2012) and has been used successfully in other areas, for example rehabilitation of young offenders. Some interventions, which have matched mentors with young people, to improve their motivation, confidence, knowledge of a specific sector or general knowledge on accessing positive destinations, have reported significant results in increasing attainment. Third and voluntary sectors would be ideally placed to source mentors and engage with children and young people in schools and beyond.

1.4 Towards a role for the Third Sector in tackling the attainment gap

The challenges for the education system in terms of tackling the large disparities in outcomes are complex and require wider interventions and mechanisms for support. Systems are required to identify children who are at risk early in the education life cycle; there are still weaknesses in terms of data available to school staff, and local authorities should have to develop mechanisms of monitoring deprivation levels through Single Outcome Agreements and clear mechanisms to ensure that staff in schools and other services have access to accurate data and information. Staff often rely on their own professional intuition and informal knowledge of the area and families' situation and they say 'they know' the families who are most vulnerable. This informal approach to identifying young people is commendable, but not always reliable, as families move in and out of poverty or hide their circumstances due to perceived stigma. Evidence suggests that the earlier the point of intervention provides greater scope for continued support and development. Families and young people can be provided resources and 'know-how' in relation to the learning support needs that are so prevalent in young people from disadvantaged backgrounds (Bradshaw, 2011). Much of this work can be achieved through schools and social support systems. Initiatives which have encouraged parents, for example, to read with their children from early on have been shown to reap results in terms of attainment in literacy and increased confidence later on in school.

In many ways, however, it is the relative deficit in social and economic capital that is harder for schools and teachers to respond to. As noted by Sime (2013), a key challenge for teachers and schools attempting to address the disparity in educational outcome is to find genuine ways for parental and pupil engagement and to challenge parents' and children's low confidence in their ability to succeed. Young people growing up in affluent regions benefit from sustained cultures of high aspiration and the continued reestablishment of the need for academic endeavour. High aspirations in disadvantaged areas, however, are undermined by histories of underachievement (Goodman and Gregg, 2010), material restrictions on involvement with extra-curricular activities, or even by a prevailing perception that school and home values are in direct conflict (Crozier and Reay, 2005). This difference in levels of engagement and aspiration can lead directly to the standards of both pupils and, in some cases, schools and teachers, being lowered until the 'soft bigotry of low expectations' (Gerson, 2014) becomes endemic.

The Curriculum for Excellence provides excellent opportunities for successful collaborations between schools and third and voluntary sector organisations. There is scope for experts to contribute to teaching in schools, not only in terms of curricular material, but also in terms of relevance of learning

to work-based practice and scope for applications beyond school. Third and voluntary sector representatives can also act as mentors for head teachers, teachers, parents and young people.

Schools also need more opportunities to develop their knowledge and expertise in developing evidence-based initiatives, sharing good practice and tapping into alternative sources of funding. Key agencies from the third and voluntary sector could share expertise and work with schools to build on existing good practice and develop a more collaborative, innovative and resource-effective approach to developing interventions.

One key aspect that third sector organisations can contribute to is the more effective use of modern technologies in making the curriculum even more relevant and accessible to young people and to help tackle the digital divide. Third sector organisations could help broker and support actions across fields such as school, work and community, and help young people use technologies in more effective ways to identify opportunities for learning, training and education beyond school. Although most young people have now direct access to mobile technologies, evidence suggests that young people in deprived areas tend to use these mainly for entertainment and communication purposes, rather than to access information for learning or work purposes (Facer, 2012).

The Third Sector also provides an opportunity to bridge the gap that exists between schools and the environments where education and learning is applied; to address the disconnect that limits many young people's perception of education and stops them seeing how their learning can be usefully employed both for society and for their own benefit. The third sector can provide the framework to take disadvantaged young people with relatively limited opportunities in local communities and expose them to environments and workplaces that make clear their potential and the significance of their educational outcome. Some exemplar schemes that are currently being managed by the Royal Society of Edinburgh's *Young Academy of Scotland* are outlined below.

2.0 Case Studies from RSE YAS for Third Sector involvement

Below are four simple examples from a range of initiatives that have been designed and implemented by members of the Royal Society of Edinburgh's *Young Academy of Scotland* in recent months. The examples used focus specifically on how the third sector can contribute to nurturing educational aspiration and engagement in academic enrichment activities for the secondary education age group.

2.1 RSE YAS Journal – *neonEidos*

neonEidos is an open access, peer-reviewed online journal founded in 2014, currently managed by the Royal Society of Edinburgh's *Young Academy of Scotland*. It provides a publication forum for academically gifted young people and was founded to nurture potential and aspiration.

Many projects managed by *neonEidos* generate open dialogue between academic reviewers and school-age people on the research projects they have become involved in. This has often allowed *neonEidos* to establish university visits, invitations to use university facilities, such as laboratories or libraries, visits to commercial partners, collaborative follow-on research, work experience opportunities and many other chances for young people to establish links with higher learning and to raise the expectations and ambition in education.

The scheme is increasingly being used by teachers in a focused way to promote the work and aspirations of individual pupils from otherwise challenging backgrounds. In schools that do not have a culture of extra-curricular engagement or an aspirant outlook to tertiary education, schemes such as *neonEidos* have served to nurture belief in the application of their studies. This initiative has also been applied to good effect to develop young people's confidence in their own potential and to establish links and experiences with universities and commercial environments from a relatively early point. In its first few months *neonEidos* has worked with over 25 schools to find ways to promote and develop the work of disadvantaged young people; this has included organising seminar events at major universities and in directing the work of three young people to the mainstream academic literature for publication. In effect, *neonEidos* serves to provide the mentoring support, the cultural and aspirational context, and the logistical means to access a wide range of extra- and super-curricular academic enrichment that schools cannot offer.

Link:

<http://www.neoneidos.com>

2.2 RSE YAS Aspirational advice campaign

Through an ongoing RSE YAS initiative, major commercial and academic institutions are using simple photo messages from high profile staff to share short aspirational messages and a hashtag to draw support for young people. The scheme is designed to open up young people's horizons to opportunities that are available to them and to, specifically, impact a number of key areas: exam results and academic aspiration, employability, physical health, mental health, citizenship and community cohesion.

Between 5 January 2015 (the day schools return from holidays) and 28 April 2015 (the first day of Scottish schools exams) , RSE YAS is asking all Scots to share a piece of advice to Scotland's young people that will help them raise their academic and career aspirations as they enter the final stages of school level education.

Links:

Twitter #AspirationalAdvice @YoungAcademySco

Facebook: Young Academy of Scotland

2.3 RSE YAS Numeracy Counts initiative

Part of the remit of The Young Academy of Scotland's Excellence in Education Working Group is to "draw upon YAS expertise to develop teaching resources that enable teachers to make full use of the interdisciplinary possibilities of CfE [Curriculum for Excellence]". The '*Numeracy Counts*' initiative, working within the Numeracy curriculum area, utilises the broad multidisciplinary nature of the YAS membership to show how numeracy matters in the everyday lives and work of Scotland's emerging leaders from the disciplines of science and humanities, the professions, the arts, business and civil society. The scheme was designed to focus on sharing knowledge and the dissemination of scholarly research (and its underlying data) to wider audiences, and the engagement between school pupils with industry and academia. A wide range of short films are now available on line which highlight the

role of numeracy in RSE YAS members' daily work. These have been made available to teachers and students to support "Numeracy across Learning" within the CfE.

Through this resource learners and teachers can find out, for example, how Cardiologist Marc Dweck uses numeracy in the diagnosis and treatment of heart attacks, discover how astrophysicist Catherine Heymans uses spread sheets when buying a new mobile phone, or how Subramanian Ramamoorthy, Reader in robotics at the University of Edinburgh, uses mathematics to calculate the probabilities of events that help to guide autonomous robots through crowded streets.

The RSE YAS are currently expanding the range of videos to cover the areas of "Sciences" and "Technologies", with the aim of expanding across all CfE areas. This will be enabled by the unique skills and capabilities of YAS members, which cuts across all areas of scholarly research, business and third sector organisations.

The '*Numeracy Counts*' initiative provides a view for young people beyond their school context to understand the real value of mathematics and its everyday applications in the world of industry and academia. The largest user group of the service to-date has been teachers who want to contextualise the content of their lessons and demonstrate real-world application. This is an otherwise challenging aspect of teaching and represents a critical step in rationalising the importance of learning for young people in social contexts that are otherwise effectively culturally dislocated from academia and industry.

Links:

<http://www.youngacademyofscotland.org.uk/numeracy.html>

http://www.youngacademyofscotland.org.uk/images/Numeracy_Counts_Resource.pdf

2.4 RSE YAS Research the Headlines

'Research the Headlines' is a blog managed by RSE YAS members that addresses the way in which research is discussed and portrayed in the media. Each post takes recent media coverage of a piece of research as a starting point, and allows readers to get to a better understanding of what was really done, and what it might mean for them, from an expert but independent position. The blog is intended to be of interest to those with and without any training in research.

The contributors to *'Research the Headlines'* are all members of the Royal Society of Edinburgh's Young Academy of Scotland. As with other initiatives, the largest single use group of this facility has been school teachers applying the knowledge and expertise to draw links between school education and its wider application. Again, this is a central challenge for schools and teachers dealing with young people who do not otherwise enjoy the enduring benefits of culturally-reinforced support for learning.

Link:

<http://researchtheheadlines.org/>

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