

Adapting School Premises as Part of a Complex Pedagogical Change Programme

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Abstract

This paper presents the experience of a UK primary school that participated in the latest wave of the Open Futures programme (2011-2013). Open Futures is a skills and enquiry based learning programme, (<http://www.openfutures.info/index.htm>), for primary schools, which intends to facilitate change in pedagogy and curriculum. There are four integrated strands: growit; cookit; filmit; and askit (Philosophy for Children). Our recent evaluation suggested the notable success of Open Futures in facilitating rapid whole school cultural and pedagogical change. Here we consider the process of change enacted in one school. This was revealed through three school visits, structured interviews with the head teacher, visually mediated interviews with a sample of students and the collection of other available data relating to student and school outcomes. The physical environment was an important part of the change this school experienced, with various effects and roles evident at different points in the process. Initial physical adaptations to facilitate new learning experiences, particularly relating to growit and cookit, were tangible signs of the programme, linked to other early changes made to curriculum, staffing and timetables. Then, as the programme developed, these specific learning environments contributed both to embedding the changes already made and facilitating further developments.

Introduction

As has been discussed elsewhere by a number of scholars, the evidence base relating to the absolute impact of the physical setting on learning is complex (Gislason, 2010; Woolner et al, 2007; Weinstein, 1979). Although the physical environment does not determine educational activities, there is evidence of a relationship between school setting and the activities that take place there (Horne-Martin 1999; 2002) and research tends to suggest that different settings facilitate some pedagogical and social practices while hindering others. For example, in classrooms organised in a traditional manner, there tends to be a more teacher-centred approach to learning with less student collaboration (Sigurðardóttir & Hjartson, 2011). This relationship of the school environment to practices has suggested to some educators and school leaders that changing the physical setting is an effective way of initiating or supporting change (e.g. Briggs, 2001). Yet the results of such environmentally-led change are mixed. Sometimes changes to the physical setting facilitate other development (Uline et al., 2009), but classroom space can be changed quite dramatically without much resulting change in pedagogical practices (Bennett et al., 1980).

It is suggested that the way that change is imposed or enacted, and specifically the extent to which it is 'bottom-up' and participatory may be important to success and sustainability (Woolner et al., 2012). Genuine involvement of staff, students and others may contribute to the school passing from the initiation and implementation stages of change to what Fullan terms the 'institutionalization' stage where change is thoroughly embedded (Fullan, 2007). Such an understanding can be accommodated within theories of educational change that conceive of social situations as comprising differing types of system from the individual to the cultural, each with their own constraints and affordances (Priestley, 2011).

In exploring the contribution that the physical setting can make to educational change, it is clearly important to relate the physical space to the other elements of the learning environment provided by the school. The conceptual framework proposed by Gislason for understanding learning environments both categorises these elements into four aspects and suggests their dynamic interaction. His model (reproduced below) has four components: staff culture, student characteristics, 'organisation', comprised of aspects such as timetabling and curriculum, and 'ecology', comprised of physical and technological resources (Gislason, 2010: 129). Although Gislason's research work in three US secondary schools investigated the schools at a particular time and was not a study of change, his observations throw light on how innovative pedagogical approaches can either thrive or fade away (see also Gislason, 2015).

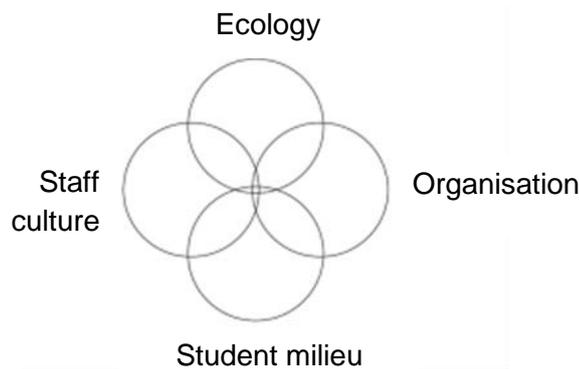


Figure 1: Gislason's model

This case study presents an instance of relatively successful educational change as enacted and experienced by one school involved in a programme of enquiry and skills based learning, Open Futures, that we evaluated recently. Our evaluation suggested the notable success of Open Futures across the seven schools examined in facilitating rapid whole school cultural and pedagogical change. Here we consider the process of change enacted in one school, looking at developments over two years from initiation through implementation to a judgement about institutionalisation, in relation to the elements of Gislason's framework.

Open Futures at Southside School¹

The School

Southside Primary School is predominantly two form entry with 420 pupils on roll (2013-14), making it a slightly above average sized primary school in UK terms. It is located in a city in the north east of England that has seen a trend of de-industrialisation and rising unemployment over the last decades. The ward served by the school is in the top 5% most deprived areas of the UK, as is the wider city. Generally around half the students are eligible for Free School Meals (FSM), with the percentage of pupils eligible the year of our evaluation standing at 48.5%, which is in excess of twice the national average of 18.3% (for 2013). Pupil Mobility is around 23%, which is above both local authority (LA) and national averages, and in the past six to seven years the school has experienced a dramatic increase in the number of pupils for whom English is an Additional Language (EAL), with 23 languages now spoken in school; EAL is currently around 18%, which is above LA averages but consistent with national averages.

Open Futures evaluation

Open Futures is a skills and enquiry based learning programme (<http://www.openfutures.info/index.htm>) for primary schools, which intends to facilitate change in pedagogy and curriculum. There are four integrated strands: growit; cookit; filmit; and askit (Philosophy for Children). The Centre for Learning and Teaching, at Newcastle University, have conducted evaluations of this programme for the Helen Hamlyn Trust since 2006. The most recent phase of evaluation sought to understand the impact of Open Futures in the 2011-2013 Curriculum Partnership schools and to understand how these impacts were achieved.

Through collaborative research with participating schools the research team used a 'Theory of Change' framework (Dyson and Todd, 2010) to establish rationales for change in each context and to plan for the collection of quantitative and qualitative data to evidence change as it happened. Data included a combination of school collected evidence (such as curriculum and organisational documentation, school statistical data, parent and pupil questionnaires) and researcher collected evidence (such as interviews with staff and pupils and a staff questionnaire issued to all schools). Each school received three visits from the evaluation team when interviews were conducted and tours were taken of the school premises. At Southside during these visits we conducted semi-structured interviews with the head teacher and one other teacher, met other key staff, and used visually mediated interviews to talk with small groups of pupils about their experiences of the programme.

Initiation

Southside had previous gardening experience through connections with the RHS and had seen the benefits for pupils, but had little or no history of using the other strands as vehicles for learning. The school decided to get involved with the Open Futures programme and committed itself to the two years of initial training and development to take place during 2011-12 and 2012-13. This included making a financial contribution to the costs of training. The additional commitment of staff time and inclusion within school planning came under

¹ Southside School is a pseudonym in order to maintain anonymity of staff and pupils.

some pressure when Southside was inspected in September 2012 by the UK's Ofsted service and it was judged that the school 'requires improvement'.

The head teacher was excited by Open Futures as a means through which the school could widen their curriculum, providing a range of new and engaging experiences for pupils. The school particularly valued the opportunity to increase pupils' knowledge of the world and develop skills with real life application and purpose; it was anticipated that this would result in a more engaging curriculum that would excite pupils' curiosity and motivate learning. The intention was that by drawing on the training and on-going support offered, teachers would be able to use the four strands as a basis for planning the curriculum and develop clear progression of skills. It was hoped that, in time, this would result in increases in attainment, as required by Ofsted, and the development of independent learning skills that could be applied across the curriculum and beyond.

It was additionally intended that Open Futures would provide opportunities for extending parental engagement. The school had previously seen successes in involving parents in gardening activities and hoped that the other strands would similarly engage parents and lead to a dialogue with the school and their children about learning. It was hoped that this, together with engaging pupils, would lead to improved attendance, particularly for a target group of pupils for whom attendance was a persistent issue.

Implementation

In common with the other schools involved in our evaluation, Open Futures at Southside acted as a catalyst for immediate tangible changes that the school was intending or aspiring to make in curriculum content (*organisation*), development of physical space (*ecology*), enterprise and community links (*staff culture and student milieu*). This was seen in the finding and organising of physical space for the programme, new topics added to the curriculum to build links between strands and with existing content, and open days to showcase gardening and involve parents. Strand leads were appointed for each strand. The head teacher also ensured that Open Futures was on the agenda for school and governors meetings, and adapted budgets and staff deployment to accommodate and resource the programme.



Figure 2: Visible growing space developed

Specifically, growing areas were extended and developed throughout the school grounds, enabling easy access for all classes and planting in tyres and pots to maximise the use of

space and ensure high visibility (see figure 2). Southside developed an existing mobile classroom into a cooking space with adjoining classroom, and space was found for filmit, in a classroom now devoted to filmit and music, allowing easy access to resources and additional space for activities (see figure 3).



Figure 3: Mobile classroom converted for cooking (left) and space allocated to filmit (right)

Southside staff got involved in the programme as a school initiative. There was some pre-existing knowledge among staff members but this was diverse and not integrated. A teacher commented,

I've taught children about growing plants, cooking meals. Not under the OF banner.

Although some had prior experience or skills in a particular strand, many did not and were reliant on the Open Futures training to up-skill themselves as well as learning specific teaching techniques relevant to the strands. Our wider evaluation demonstrated that school staff across the schools were very impressed with the initial training they received. The Southside head teacher commented,

It is what I always envisaged this school to be but it only happened because of the training available with Open Futures ... Open Futures was that key that unlocked the opportunity to make that come true.

Both pupils and staff at Southside were enthusiastic about Open Futures. Pupils commented that they value learning new skills that they can then use at home and in the future, as well as appreciating the strands as 'fun', 'exciting', 'different' and 'messy'. In terms of enjoyment pupils rated cookit and filmit particularly highly. Staff believe that this enjoyment is significant in engaging children in learning and reported that behaviour was particularly good during Open Futures sessions. As anticipated, the Open Futures activities provided a context for other learning:

What we do know is that it tends to be the Open Futures things that children remember having done you know, so if you say to them you know we were talking about gasses and you say to them remember when we did that and it's the yeast activity in the cookery room they tend to remember (head teacher).

It appears that the integration of diverse skills and experiences can enhance the transfer of understanding between situations, but this seems to happen initially because of explicit linking of strand and curriculum knowledge and skills. In a questionnaire comment, made in Spring of the second year of the programme, a Southside teacher explained that s/he was involved in the following curriculum development:

Plan strands into the yr 2 curriculum. Try to fit NC & OF into a timetable. Each term we try to incorporate each strand into the topic.

Over time, however, the links between the elements of Open Future and with the wider school curriculum have become more seamless, although there are still recognisable Open Futures activities, often taking place in the explicitly Open Futures spaces described above.

Southside also hoped to use the Open Futures programme to enhance school-home links. This was envisaged to include improving engagement of all parents with school activities and their child's learning, as well as tackling the poor attendance of some specific pupils. The school organised a number of events relating to Open Futures, particularly to the growit strand, such as planting and making scarecrows, and a 'Farmers Day' to showcase pupils' produce and achievements over the year. Southside reported small increases in parental attendance at such events, although there was still concern expressed about parents' reluctance to be more actively involved. Anecdotally staff hear from parents that Open Futures activities are often talked about at home, that children are excited and motivated and often want to share these experiences with their families. Some children and parents report extending these activities at home, with examples of gardening, practising recipes learnt in school and making films. Student comments included:

My Granddad applied to do the allotment and now I can help him.

You can take it home and show your family and then do it at home.

We filmed each other when we were learning about the Vikings, then I filmed my sister at home.

As part of a strategy to address the needs of pupils at risk of becoming persistent absentees, school staff engaged with specific parents. These parents report that growing, cooking and filming activities in particular were influential in making the children 'want to come to school'. The overall strategy has been extremely effective with 29 of the original 45 pupils now achieving good attendance.

Institutionalisation

After two school years involved in the Open Futures programme a number of changes had occurred at Southside. The integration and mutual dependence of these developments, together with the evident enthusiasm of the head teacher and other staff, suggested to us that these were indeed signs of a deeply embedded change in pedagogy and culture.

When the school level indicators showed small, but positive, change the head was cautious, but proposed that there could be a link between raised attainment and the programme:

I believe looking at the work they've done in preparation for their SATs I do believe we are going to get our best reading results with lots of level 5's and that's because the quality of those responses for the higher level questions are improved because of the way they now think and interpret information and I don't think it's any coincidence that they've had this experience and that we have made quite a significant leap. (Head teacher)

She was further convinced of the efficacy of Open Futures because, as she pointed out, implementing such a programme may in the short term put outcomes under pressure:

...for attendance to make slight gains and for attainment as measured in SATs etc to hold steady at a time of curriculum change, i.e the implementation of O.F strands, is in itself noteworthy because change which involves everyone learning new skills and finding ways to include them across the curriculum could have been a disruption that caused a dip in these measures until it became embedded in practice. I think that it is a tribute to the quality of the training and to the staff of all the schools that this did not happen. (Head teacher, email, 27.1.14)

This suggests change within practices and understanding at Southside (*staff culture and student milieu*), but it is evident that these more intangible developments are bolstered by embedded changes to curriculum, staff training and the school environment (*organisation and ecology*). For example, training of Southside staff in askit ensures that this strand is an integral part of learning from Foundation Stage through to Year 6. The physical environment is also important to the school's development of askit, since, in addition to developing skills and exploring topics in lessons, pupils are encouraged to use the 'wonder tree' (see Figure 4) as a means through which they can ask their own questions and offer answers across the school. This has proved to be a popular resource, facilitating reflections and conversations across year groups.



Figure 4: The 'wonder tree' for sharing questions (left) and other Open Futures display

Meanwhile, although the teacher comments reproduced below show the challenges of developing the programme, they also suggest awareness of constraints and affordances in terms of the organisation of staff and space:

Important to learn about ever changing technology. Unfortunately, it will be out of date very quickly. We need continuous training (CPD)

Always need more adults (better quality teaching because you can have smaller groups. If TAs are ill/taking other intervention projects the lessons have to be rearranged or abandoned. Timetabling diff. Bad weather caused havoc in the garden. No space in classroom for trays or seedlings

Overall, Southside is committed to Open Futures as a permanent part of the school curriculum and life; it is convinced of the benefits in providing a context and purpose for learning, together with the skills necessary for independent enquiry, and believes that pupils are making good progress towards these aims.

Understanding change enacted through Open Futures

At Southside, as well as in the other schools involved in our evaluation of Open Futures, we observed initial physical alterations and organisational changes becoming established, being further developed, and helping to embed Open Futures activities in the life of the school. We observed less sense of individual strands and more talk of an Open Futures way of doing things. Open Futures may be less explicitly referenced in school planning, because it is now so accepted and is firmly rooted in protected budgets and staffing. During the later interview

and in subsequent email communication, the head teacher described how the changes due to the programme enable better learning processes and teaching practices to continue to develop. The model that we developed of this cyclical development within Open Futures schools (figure 5) summarises the changes at Southside.

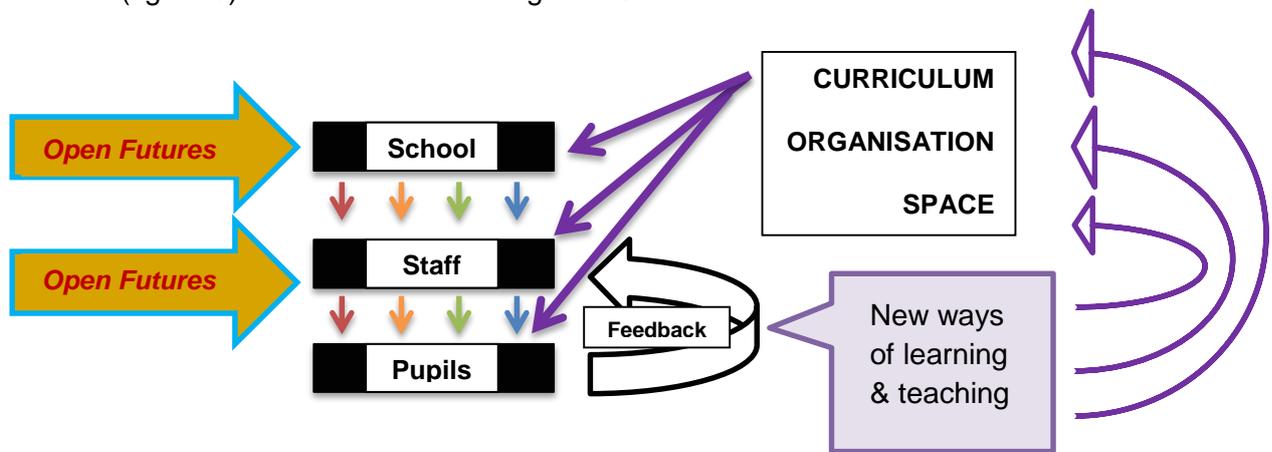


Figure 5: Model of Open Futures change process

Staff professional development through Open Futures enabled teachers at Southside and the other schools to make the strands and activities their own. Open Futures tends to embed collaborative practices between staff members, enhancing curriculum coherence and pastoral care across the school. As seen at Southside, once Open Futures is established, there is on-going, mutually dependent development of curriculum, organisation and space. In this and other ways, Open Futures strands are integrated with the wider curriculum and this integration is embedded in physical space, particular activities and ways of learning.

Applying Gislason's model of learning environments to the case of Southside we can see developments within all four elements as detailed above in the case study. The coherence between these changed elements, provided by the Open Futures programme, suggests that the overall environment will be harmonious, rather than in tension, contributing to the success of the change. The four elements of Gislason's model are also evident in our model of change: 'organisation' of people and time together with 'curriculum' align to his *organisation*, while the development we noted of 'space' is an aspect of his *ecology*. The 'new ways of learning and teaching' suggest changes to *staff culture*, which the Southside head argued were both cause and effect of enhanced learning potential among the students, a key part of *student milieu*. It seems important, however, to note the dynamic relations between these elements. As suggested by our model, the elements are not just all present and cohering, they are also interlinked, with change to one element enabling or even driving change to others. This understanding may partially explain how Open Futures succeeded in Southside, and indeed in other schools involved in the programme. Furthermore Gislason's model could be adapted specifically to Open Futures and used by schools to plan and chart their progress.

However, looking outwards, the relative success of Open Futures, which is evident across schools that have been involved over the years, leaves some puzzles remaining. The research evidence base on educational change clearly concludes that whole school change is difficult and takes considerable time (Fullan, 2007; Thomson, 2007). Fullan suggests that

the 'institutionalization' of an initiative which is required to underpin long-term change can take 2-4 years for 'moderately complex changes', while larger scale school change might take as long as 5 to 10 years (Fullan, 2007: 68). However Open Futures tends to produce immediate changes and be sustained: changes are evident in schools years after initial training, with the effects on the curriculum underpinned by changes to school planning, budgeting and physical space. Furthermore this achievement occurs in the context of contemporary school teaching and management in England, where there are many and varied projects and initiatives emanating from the Department for Education, Local Authorities, charities and organisations; all are competing for attention within a tightly packed curriculum, requirements for explicit tracking of pupil progress against national norms, and an inspection regime that is experienced as stressful and adversarial.

In Priestley's terms (see Priestley 2011 for discussion of his agency, structure, culture framework), Open Futures may at first appear to be enacted mainly at the structural level, which his own and other research suggests is rarely sufficient. For example, he describes relatively superficial structural changes intended to facilitate curriculum innovation but limited by prioritising 'externally visible structures rather than addressing underlying practices' and making changes that are 'viewed in largely organizational rather than pedagogic terms' (Priestley, 2011: 13). Similarly, Szczesiul and Huizenga criticize two schools they studied that 'created structures ... [to support the desired change in teacher behaviour]...but failed to create a cultural context that would bolster teacher efficacy and motivation' (2014: 184).

We would like to argue that, contrary to a cursory view, detailed examination of the change process at Southside, and other Open Futures schools, reveals changes at the levels of individual agency and culture, in addition to the many structural changes described above. The Open Futures support and community provides a culture within which school staff can situate and understand the structural changes. The distinctiveness of this culture from the prevailing culture in English education appears to enhance the agency of school leaders, as demonstrated by the Southside head teacher. For example, she explains the school's commitment to the programme in the following terms:

It's again holding on to what we firmly believe is a good model for these children to learn, even if they have to learn the facts and figures there's more to it than that, it's the story behind those facts and figures and I think this (Open Futures) will stand them in good stead for working through that curriculum whatever it looks like ... because we've started to get this independent learning and thinking it will stand us in really good stead for the changes that are going to come. (Head teacher)

Meanwhile, the practical development of the programme depends on devolving responsibility to staff, tending to enable individual agency in making progress with their part of the programme: this is seen in allocation of strand leadership roles to staff, mainly but not exclusively to teachers, and in increased involvement of teaching assistants in developing specific strands. It would appear to be in this way that Open Futures follows the suggestion of the literature of the importance of participatory processes that involve a range of actors in decision-making.

Another, related, way to understand the success of Open Futures in effecting change is to return to the three elements of successful school change identified by Fullan: being embedded in school structures, having a critical mass of school staff trained and committed,

and having a procedure for continued support (Fullan, 2007:102). It is clear that the 'institutionalization' of Open Futures, and the earlier stages evident in the Southside case study, exemplify these three elements, which can be seen as operating within each of the structural, agency and cultural systems of the school situation.

What is additionally notable, however, about the change enacted through Open Futures is the centrality of the physical environment through the stages of development. As described above in the case of Southside, the programme had some clear initial requirements for physical changes to be made, most specifically for the growit and cookit strands. Once complete these spaces facilitate the early curricular and pedagogic developments, but also enable progress towards further integration within the strands and with the existing curriculum. In addition, these spaces provide a tangible reminder of new intentions and values: in finding classroom space for filmit, the Southside head signalled her belief in this as valuable learning as well as providing a base for the strand. As the head teacher of a school that had been recruited in an earlier wave of Open Futures summed up their sustained involvement:

If you've got that infrastructure, you can use it and you want to use it don't you? (Head teacher, School A)

To conclude, in Southside, and in other Open Futures schools, change in parts of the physical school setting and the inclusion of specific features was able to produce change in learning and social practices. The case study investigation of this process of the environment affecting practice has revealed concurrent developments in organisational structures, teacher and learner roles and the resulting culture of education in these schools, which can be understood with reference to various theories of educational change. These suggest how certain characteristics of the Open Futures programme seen to have contributed to its success, but leave space for us to note the vital ingredient of change to the physical setting within a context where that setting is understood as part of the pedagogical, cultural and organisational whole that is the school learning environment.

References

- Bennett, N., Andreae, J., Hegarty, P., & Wade, B. (1980). *Open plan schools*. Windsor: Schools Council Publishing/NFER.
- Briggs, A. (2001) Managing the Learning Environment In Middlewood and Burton (Eds) *Managing the Curriculum*. London: Sage.
- Copa, G.H. & Pease, V.H. (1992). *A new vision for the comprehensive high school. Preparing students for a changing world*. St. Paul, MN: University of Minnesota
- Dyson, A. and Todd, L. (2010) Dealing with complexity: theory of change evaluation and the full service extended schools initiative, *International Journal of Research & Method in Education*, 33(2): 119 — 134
- Horne, S. C. (1999) Classroom environment and its effects on the practice of teachers. PhD thesis, University of London.
- Horne-Martin, S. (2002). The classroom environment and its effects on the practice of teachers. *Journal of Environmental Psychology* 22(1-2): 139-156.
- Fullan, M. (2007) *The New Meaning of Educational Change* (4th Ed) New York/Abingdon: Routledge

- Gislason, N. (2010). Architectural design and the learning environment: A framework for school design research *Learning Environments Research*, 13, 127–145.
- Gislason, N. (2015). The open plan high school: educational motivations and challenges. In P. Woolner (Ed) *School Design Together*. Abingdon: Routledge
- Priestley, M. (2011) Schools, teachers, and curriculum change: A balancing act? *Journal of Educational Change* 12:1–23
- Sigurðardóttir, A.K. & Hjartson, T. (2011). School buildings for the 21st century. Some features of new school buildings in Iceland. *CEPS Journal*, 1(2):25-43.
- Szczesiul, S. and Huizenga, J. (2014) The burden of leadership: Exploring the principal's role in teacher collaboration *Improving Schools* 17(2): 176-191
- Thomson, P. (2007) *Whole school change: a review of the literature*. London: Arts Council England
- Uline, C. L. et al (2009). The walls still speak: The stories occupants tell. *Journal of Educational Administration*, 47(3):400–426.
- Weinstein, C. S. (1979). The physical environment of the school: A review of the research. *Review of Educational Research*, 49(4), 577–610.
- Woolner, P., Hall, E., Wall, K., Higgins, S., & McCaughey, C. (2007). A sound foundation? What we know about the impact of environments on learning and the implications for Building Schools for the Future. *Oxford Review of Education*, 33(1), 47–70.
- Woolner, P., McCarter, S., Wall, K., & Higgins, S. (2012). Changed learning through changed space: When can a participatory approach to the learning environment challenge preconceptions and alter practice? *Improving Schools*, 15, 45–60.