Plowden and Primary School Buildings: a story of innovation without change

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ABSTRACT The Plowden Report encouraged the design of more compact and flexible school buildings to accommodate its vision of child-centred teaching. These schools came to be known as 'open plan'. By the late 1970s about 10% of schools were of open-plan design but researchers found serious weaknesses in the quality of their work. Plowden's ideals were not often to be found in practice in open-plan schools. Changes in teaching methodologies had not kept pace with innovation in school design and the rhetoric of child-centredness was not matched by the reality of the experience of many primary pupils. The explanations for this include the conservatism of teachers as well as the propensity to failure of centrally imposed ideas.

The Plowden Report (Central Advisory Council for Education, 1967) had quite a lot to say about school buildings. Chapter 28, 'Primary School Buildings and Equipment', began by examining 'serious deficiencies'. Local education authorities were not building enough new schools to keep pace with the demands of a growing population, let alone replacing or improving old stock. The 'really poor' conditions included schools without electricity or hot water or water-borne sanitation or having no hall. Said Plowden, 'There may be a good school without good buildings, though this is no excuse for the deplorable conditions in which many children are educated' (para. 1234).

Until the mid-1950s, new primary schools were often designed on the 'finger plan' in which long corridors of classrooms radiated out from central cloakrooms, lavatories, the hall and (the ultimate in space-wasting luxury) a dining room. The design of these buildings was akin to pre-war elementary schooling in which medical advice on the health benefits of cross-ventilation and folding external doors was the priority. Pedagogic principles were scant; the not very large 'box classrooms' reflected a view of the homogeneity of year groups and of trained, and therefore autonomous, teachers who could work at a distance from the head's office in their largely didactic style with passive pupils.

By the late 1940s, as much as 60% of the space in these schools was devoted to non-teaching areas. They were costly, slow to build and wasteful of space.

A reduction in 1950 in the cost-place allowance for new school buildings prompted architects to think again, not only about cheaper and faster building methods but also about more compact plans that reduced the total floor area by a third whilst increasing the teaching space. This was achieved by reducing the circulation areas (and doing away with dining rooms). Plowden approved: 'Buildings became more informal and domestic in character and likely to foster friendly, personal relationships. A greater variety of equipment and materials including more books led to new needs for display and storage, and for different types of working surfaces' (para. 1093). These developments may have been encouraged by the spiralling costs of new building but they coincided fortuitously with changing notions of the nature of primary education which the Ministry of Education's Building Development Group identified from studies of several schools and which the Plowden Report championed. This Group's work was central to the story and two of its most influential architects, Mary Crowley (later to become Mary Medd) and David Medd, who were strongly committed to the child-centred principles embodied in the Plowden Report, spent a great deal of time visiting schools where they could see these principles in action. Their Building Bulletins were as much treatises on educational practice as advice on building construction and design.

Child-Centred Strategies

The Building Development Group identified three organisational strategies that were being used by some teachers and that supported changes in building design. First, there was 'family' or 'vertical' grouping, that is, the grouping of pupils irrespective of age. Family grouping was established in some infant schools by the early 1930s and spread into junior schools in the 1960s. The Plowden Report noted that family grouping was a minority practice found in 'two or three areas which are among those which have the most lively infant school work in the country' (para. 794). By 1978, Her Majesty's Inspectors found that about a quarter of junior classes were family grouped, but this would have included the many schools that were too small to do otherwise (Department of Education and Science [DES], 1978). Family grouping, when undertaken by choice, was concerned with children making progress at individual, rather than at age-grouped or class, rates and necessitated flexible grouping and teaching arrangements.

The second strategy was the 'integrated day'. Concern for individuals led teachers to abandon the rigid timetable and to institute an integrated day. As with all the jargon of child-centredness, the term has many different meanings. The common element in definitions and descriptions is that different children engage in a variety of activities at the same time. It is a time-management, rather than a curriculum-management term. The integrated day is a major element of the child-centred paradigm for if the pupils are engaged in a variety of different

activities, they cannot be taught didactically as a class. The teacher has to provide for individual and group levels of work and the timetable-free day allows the child to pursue the task for as long as it takes. Despite declaring that 'the child is the agent in his own learning' (para. 529), the Plowden Report had little to say about the integrated day (and confused it with curriculum integration) but it did find the idea to be 'widespread', presumably mainly in nursery and infant classes because the strategy was 'spreading to junior schools' (para. 536).

The third of the child-centred strategies which form the rationale of the new thinking on school design was 'team teaching'. Again we have a term which had as many meanings as practitioners but might generally be defined as a teaching situation where two or more teachers cooperatively plan and implement the instruction for a single group of pupils, using flexible grouping methods to meet the needs of the children. To achieve these strategies in classroomed schools, some teachers had begun to spread their work into the corridors and cloakrooms. Activities had extended to the degree that 'even the best designed traditional building was not able to accommodate them' (Bower, 1968). Thus, team teaching in the primary school arose out of the integrated day, out of child-centred not class instruction principles. Teachers working an integrated day found benefits in cooperation, for example in the use of shared work areas. Cooperation became formalised into team teaching arrangements and the team teaching arrangements were then provided for in the design of new schools. The early designs of the Building Development Group produced shared practical areas between two classes to prompt teachers to work more closely together.

Infant Schools

The three child-centred organisational strategies that informed the Building Development Group's work had their heartlands in two branches of the primary school system: infant schools and small rural schools. When the Ministry of Education produced its Handbook for Primary Schools in 1959 (*Primary Education*) it gave credit to infant schools for the development of child-centred approaches: 'It is fortunate that when primary education was at last established as a separate phase in its own right, it had this cherished tradition of infant education to draw on ... the ever deepening concern with children as children which has gradually spread from the nursery and infant schools to the junior schools'. The signs of a child-centred approach to teaching were apparent by the early 1900s and encouragement to experiment was given in the 1905 *Handbook of Suggestions*, which was issued by the Board of Education soon after the establishment of local authorities: 'The only uniformity of practice that the Board of Education desire to see in the teaching of Public Elementary Schools is that each teacher shall think for himself, and work out for himself ... such methods of teaching as may use his powers to the best advantage ... The teacher ... must know the children and must sympathise with them ... He will seek ... to

draw upon their experience as a supplement to his own and so take them as it were into partnership for the acquisition of knowledge'. Later the Hadow Reports (Board of Education, 1931, 1933) said much the same thing and according to Plowden, 'virtually laid the foundations of what exists today' (para. 1).

By the end of the 1930s, some infant classes were family grouped and the growth of the provision of nursery schooling was producing an increased awareness and concern for the needs and characteristics of even younger children. Susan Isaacs's pioneering work at the University of London Institute of Education led to child development becoming the central field of study for infant teachers in training and with the massive extension of teacher training necessitated by the post-war birth rate, more and more 'child-centred' teachers were drawn into teacher training work.

Rural Schools

The second home of the child-centred tradition is the small rural school. Usually too small to set up age-grouped classes, the rural school typically had one infant class and one or two others. In such an environment it was possible (though not necessarily typical) for a teacher to be

> The very symbol and embodiment of love, the centre whence all happy, harmonious, life giving, peace diffusing influences radiate ... Two things will strike the stranger who pays his first visit to this school. One is the bright and happy look in every face ... [the child] does not wait, in the helplessness of passive obedience, for his teacher to tell him what he is to do and how he is to do it. If a new situation arises, he deals with it with promptitude and decision ... he can think things out for himself, he can devise ways and means, he can purpose, he can plan ...

This might be a description of a 1960s 'Plowden' school; in fact it is of a village school in Sussex in 1910, described by HMI Holmes (1912) in *What Is and What Might Be*. Whilst this school would not reflect the atmosphere in the majority of schools, the very nature of the one or two roomed school necessitated mixed age classes and promoted group and individual work, and its smallness enabled a 'child-centred' head teacher to be very influential. As Plowden noted, 'A good head can quickly influence a small school, particularly if, as is becoming more common, a rigid class organisation is broken down and teachers pool their ideas and gifts' (para. 479). There are several descriptions of village schools with a similar ethos in the literature; for example, Sybil Marshall's Cambridgeshire school and Vicars Bell's school in Hertfordshire.

The advantage for the two or three roomed rural schools built in the late 1800s was that they were protected from the fashion for box classrooms in large urban buildings. Building programmes concentrated upon the growing secondary provision and upon urban housing development so the village

schools were mostly neglected. This neglect undoubtedly led to schools of low standard but it also enabled some to adopt child-centred approaches: some of these buildings had folding partitions between classrooms which could be opened up to form larger spaces.

> It was common practice for children of varied ages and abilities to work together in close proximity to each other, frequently sharing the equipment and other facilities. Inevitably more individual methods of learning were necessary and the village school teacher naturally adapted herself to a supervisory rather than expository role. The concept of a separate classroom for each year group was alien to these schools. Village school organisation showed the artificiality of the distinction then current between 'class' and shared space, and went far beyond the concept of 'dual purpose' rooms commonly accepted for dining and practical work. (Seaborne & Lowe, 1977)

The Building Development Group admired the village schools' distinctive character:

> The combination of small numbers, a wide age range and a diversity of interests and abilities, produces a more subtle relationship between teachers and children than occurs in most large schools, and encourages the sharing of skills, experiences, facilities and space. (DES, 1967)

They felt that these features of the village school were 'the right way of working in primary schools generally' (DES, 1967) so it was the village school that became the model for the first primary school to be designated 'open plan', at Finmere.

Designed by David Medd and built in 1959 in cooperation with Oxfordshire Local Education Authority (and its Primary Education Officer, Edith Moorhouse, whose vision matched the Medds's), the 50-pupil Finmere Primary School, in Oxfordshire, took the notion of the two or three roomed school and modified it into a whole space which could be subdivided or opened out at will – a series of linked work areas. It reflected the work that had been going on for many years in many infant and some village schools and was influenced in particular by Brize Norton village school, also in Oxfordshire, a two-roomed school (three rooms if you count the 'babies' annexe), whose flexible internal organisation would not have been recognised by its Victorian builders. In the new building,

> There will be some children with keen, enquiring minds, sufficiently imaginative and resourceful to press on with their work, whether or not the teacher is available. Others will be slow plodders, needing much coaxing from the teacher. A class may therefore arrange itself into several groups, each engaged in a different type of work and requiring a different range of books, apparatus and materials. It would be possible for reading, writing, measuring, calculating,

> constructing, modelling, painting and drawing to be going on at one and the same time [i.e. the integrated day]. (Ministry of Education, 1961)

The Plowden Report gave prominence to Finmere's design:

> The essence of the plan is that the children mostly work in small groups or individually, the two teachers sharing their time between them. The accommodation consists, therefore, of a series of small working areas, all with a degree of seclusion, while still a part of the whole. One is a sitting room, with a curtained bed recess. Three are furnished as studies; two others as 'workshops', with access to a veranda. One is a 'kitchen' and one a library. These open on to somewhat larger areas which in turn are linked, by means of sliding-folding doors, to a space large enough for groups of children to move about more freely. If both sets of doors are open, the whole teaching area (approximately 1,800 sq. ft.) can become one space. By closing one or both sets of doors, it can become either two or three separate rooms. (Note to Diagram 8 on p. 396)

The next project of the Group, also described and illustrated in the Plowden Report, was the very much larger Eveline Lowe Primary School, in London (Department of Education and Science, 1967). Once again, we have a series of linked spaces and shared areas; the village school had been enlarged and translated to an urban setting.

So, the pioneering practice in both infant and rural schools where variations on family grouping, the integrated day and team teaching were observed and promoted by the Building Development Group, supported by the Plowden Report and encouraged by tight cost-place allocations for new schools, led to new building designs that came to be known as 'open plan'. By the late 1970s these represented about 10% of primary school buildings. In this we have an example of a central government project, presented as advice but much encouraged by cost controls. The Development Group's treatises and exemplars allowed it an all-pervading influence on primary school design. If school design shapes the activities which take place within the school, and this was certainly the Group's intention, then the design also shapes the curriculum and the methodology. Thus the open-plan primary school represents a form of centrally initiated innovation. But as we know from other examples, some very recent, central intervention in the work of schools does not necessarily produce the desired effect.

Innovation without Change

In the 1970s and 1980s, open-plan primary schools provided a focus for researchers. They found that the link between open-plan buildings and child-centred practices is, at best, tenuous at the classroom level. Seefeldt (1973), for

example, writes, 'Yet when one settles down carefully to observe and scrutinise the teaching-learning process that is taking place in open plan schools, the observer leaves with a somewhat different and disquieting feeling. Open spaces ... do not necessarily guarantee freedom in the classrooms' (quoted in Bennett et al, 1980). This view was supported by the observations of Adelman & Walker (1974) when investigating the quality of interaction in open-plan schools:

> In some of the schools we have studied we have seen the surface features of openness, but often a failure to use these to create educationally open settings. Often systems of workcards or a proliferation of resources are used by teachers as a way of shifting authority from themselves on to the materials. They are able to ease themselves out of what they perceive as an undesirable and difficult role, that of the 'traditional teacher' without fundamentally changing the nature of the classroom. ... This is perhaps the situation best described by the phrase 'innovation without change'. ... A new open plan school containing adaptable furniture and flexible services, small groups, individualised curricula, resource areas and community services, does not equal open education in action.

Evans (1979) studied the transfer of an infant school from its old three-decker building into a new open-plan one and found that

> although practice had been diverse and idiosyncratic within the closed classrooms of the old school, the move to an open plan building produced the introduction of a timetable, subject specialisation at the top of the school and a considerable amount of streaming. Thus the very barriers which the educational architects claimed were dissolving were in fact reinforced and in some cases instigated in response to the new forms.

She found, in addition, that the amount of time the children spent in play and creative activity was reduced.

Bennett et al (1975) studied 11 open-plan schools in Cumbria and found that the majority of the 74 teachers worked independently. Derbyshire Local Education Authority advisers found that in their open-plan schools most teachers were still teaching 'inflexibly' to class groups, particularly in junior schools and that the work areas in the schools were usually used in rotation according to a timetable (Arkwright et al, 1975). Hurlin (1975) studied four open-plan schools and found no children engaged in enquiry/discovery work; two of the schools operated on timetables with bells to indicate lesson changes. Jarman (1978), writing about some Oxfordshire schools, described mathematics as

> individual assignments and workcards with each child virtually doing a correspondence course ... Any sense of integration in the subject matter is lost. Art is done in the Art Room, Maths in the Maths Room and so on. Next, the timetabling necessary makes

> spending continuous time on a worthwhile project impossible. Added to this, the children may have neither a permanent base nor a teacher who is their own. Clearly such an organisation has lost, at a stroke, all the advantages of modern primary education gained over the last half century.

The ORACLE Study (Galton et al, 1980) found less pupil–pupil interaction and considerably less pupil–teacher interaction in open-plan schools than in box classrooms and that the quality of teacher questioning and teacher–pupil feedback was less good. The predominant teaching style was that of the 'Individual Monitor', a style characterised by 'the low level of questioning and the high level of non-verbal interaction consisting largely of ... marking'. The study revealed a great deal of individual work being done by pupils but little individual attention from the teachers; investigative work was scarce, as was higher order questioning from teachers:

> Grouping appears to be an organisational or managerial device rather than a technique for promoting enquiry based learning using collaborative methods ... The move to individualisation has not been accompanied by a change in direction from didactic teaching to 'discovery' learning ... Progressivism as per Plowden is hardly found in practice ... Many classes have little or no art. (Galton et al, 1980)

The Department of Education and Science Building Development Group visited 34 schools, some of which were open plan, when gathering information for their 1976 design, the Guillemont Primary School in Hampshire. They found 'Considerable attention to the three R's, often table and chair based, with reorganisation of the grouping for art, craft and practical investigation' (Department of Education and Science, 1976).

A Schools Council Study (Bennett et al, 1980) noted a considerable amount of timetabling and ability grouping in open plan schools, a preponderance of the 'skills and frills' approach ('basics' in the morning, other activities in the afternoon) and up to about one fifth of a day (i.e. a whole day a week) lost in transition and administration (but mostly in transition). The Study concludes, 'An open plan school is no guarantee of open or informal teaching' (Bennett et al, 1980).

These evaluations demonstrated major contradictions between the rhetoric of child-centredness and the realities of the organisation of the teaching in the open-plan schools whose design had been promoted by Plowden and encouraged by government incentive. Several researchers found explanations for the contradictions in teachers' own ambivalence. Sharp & Green (1975), for example, thought that the broadening of the curriculum was being used merely to increase the number of areas in which children could be categorised and controlled. King (1978) believed that child-centred theories were largely accepted without question by teachers as truths and therefore unexamined in relation to their everyday practice. A Schools Council study (Ashton et al, 1975)

of the views of a large number of teachers found that the majority did not favour child-centred aims.

Some of the ambivalence might be explained by problems of 'territory'. Evans (1979) put forward the view that

> Many infant teachers have struggled to adapt to the forms imposed on them by resorting to the existing educational paradigm of subject specialisation. The dissolution of the classroom walls may indicate the weakening of hierarchical and the strengthening of collegial control, but the effects of this have not always been fully understood. Deprived of their separate classrooms, which historically were a hard-won privilege associated with training and certification, it is hardly surprising that many have turned to an alternative power-conferring practice, whatever its educational merit in relation to the infant child.

Bennett & Hyland (1979) support this view:

> It would appear that for whatever reason many teachers have been unable or unwilling to forego their territory. Walls have been replaced by other physical, or even psychological barriers. In this way the traditional 'one teacher one class' system has largely been maintained. [This] ... throws substantial doubt on the assumption which a number of researchers have accepted without assessing its validity. It is not unusual to find researchers who have sampled open plan schools and written their report in terms of open education as if design and pedagogy were synonymous.

Bennett et al's 1980 national study also suggested that a majority of teachers in open-plan schools were working in isolation rather than in the cooperative groups that form a central part of the rationale. He also found that a majority of teachers in open-plan schools would have preferred to work in box classrooms. The National Union of Teachers said, over-simplistically, that 'necessity, expediency' and 'financial pressure' had forced open-plan schools onto an unwilling teaching profession (NUT, 1974).

Uncomfortable Conclusions

The problem was that the vision of the Medds, the Building Development Group and Plowden was based upon observations of a minority of creative teachers in a small number of schools whose work met with their approval, yet they expected their recommendations to be taken up widely. The failure of many open-plan schools to implement the child-centred expectations of their ancestry may stem from the open-plan school itself being a prime example of a national development project which was imposed on the education system. It had no dissemination programme and it was handed to heads and teachers by local education authorities with little or no attention to training. With

hindsight, we know that centrally initiated projects have little effect on the work of the teacher in the classroom; that the teacher must change before development may take place. If this is true of later Schools Council and National Curriculum projects, it was certainly true of the development of the open-plan school.

It is difficult to escape uncomfortable conclusions. Plowden advocated more flexible buildings to provide a more child-orientated and domestic atmosphere for the implementation of its philosophy that the child is the agent of its own learning. In some schools, Plowden's philosophy could be seen at work. However, the work within many open-plan schools was little different, perhaps even less stimulating, than that found in 'formal' box classrooms. We had what Adelman & Walker (1975) described as innovation without change. It has been argued that it may take teachers at least 20 years to catch up with the buildings but even if this was happening, other events, such as a shift in the political climate which turned 'progressive' and 'child-centred' into terms of abuse, the arrival of the National Curriculum and the testing of the 3Rs by Standard Assessment Tasks, took over.

Meanwhile, versions of team teaching are returning as the appointment of classroom assistants has required teachers to plan and work in cooperation with others. Subject teaching and timetables have replaced the integrated day, except in the much-expanded nursery sector where it began. Family grouping can still be found, particularly in schools that are too small to set up age-grouped classes, but it is now known as 'mixed age classes' and heads occasionally apologise to parents that they have no alternative. Didactic teaching has become, once again, the order of the day, made modern with the use of interactive electronic whiteboards. The arts, so central to Plowden, are increasingly neglected. Class teaching is difficult to implement in open-plan schools so in some places walls went back up. And 40 years after the Plowden Report, some schools are still waiting for a hall.

Note

'Child-centred' is shorthand for the informal teaching strategies advocated by Plowden in which the child's interests took precedence over the formal curriculum. Indeed, at the time there were no curriculum requirements, other than in the teaching of religious education. Estimates of the number of primary schools (not necessarily open plan) that adopted Plowden principles vary from a third to as few as 9% (see Maclure, 1984).

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