

## THE BIGGER PICTURE

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School building can rarely, if ever, be considered in isolation, but must be related to the general political, cultural, economic and technical climate in particular places at particular points in time. The combinations of these four variables are unique to each situation, and they are always present. The first two especially operate to influence the thinking of administrators, and the latter two, usually at operational level, influence the thinking of those concerned with our built environment, more particularly the architects among them.

School building programmes do not originate with architects, but with statesmen, politicians, and administrators, who provide the necessary drive and have the necessary powers to see that programmes do not collapse by being given too low a priority in competition with other desirable programmes. They tend to see the architects, who design the buildings they need, more or less as technicians at professional level who are able to tell them, quickly, how much their projects are going to cost and how soon they can be realised, given the money, and how costly they are going to be to maintain. They assume that architects are not interested in the complex preliminary decisions of policy or, if they are interested, even so they are not competent to engage in these matters which are outside their own professional field.

To a large extent this is true. The person who designs a school may not be interested, professionally, in where the teachers are coming from or how they are trained (unless he is called upon to design a teachers' training college) but, by the very nature of his own training, he is able to see the bigger picture, and also, by the nature of his training, he is aware of social problems of which school building is a significant manifestation.

What is really important about school building programmes is not the buildings themselves. They are simply manifestations of ideas in the form of space containers, within which foreseeable (and to some extent unforeseeable) educational activities can take place. If the spaces are so arranged that changes in educational policy or teaching method can be accommodated during the life of the building, so much the better. The most important consideration is whether the overall educational plan for a country, region, district, or city is a good one and can be implemented. As with the buildings themselves, an educational plan must be adaptable and flexible, and comprehensive in the sense that it must embrace the full range of educational services required.

In order to utilise the maximum amount of available talent, it would seem to be a sound move to include designers of school buildings in the macro-planning processes. This does not ensure that the resulting buildings are going to be successful, but it does help to create favourable

conditions for relating school building to other building efforts, and for those concerned with microplanning of school buildings to be given a good chance of appreciating their own contribution to the total building programme and receiving intelligent instructions, or briefs.

Macro-planning, which involves political, economic, and social objectives and resources, must relate school building to urban and rural situations in general, and to other community buildings and housing. As far as the school buildings themselves are concerned, the problems are mainly connected with the built form, with location and with communications and services, and educational objectives.

#### A multi-disciplinary planning team

All of these require associated micro-planning efforts, and these may be defined as being related to administrative, educational and architectural problems. All three require, ultimately, what the medical profession prescribes as TLC, or tender loving care. For the administrators and educators, this has to be a continuing process. From the architect it has to be concentrated in the period between being commissioned and handing the building over, having provided all that is necessary to bring the building into operation, fully serviced and equipped.

Naturally, in any process described as 'planning', physical planners are assumed to be involved and, although some of them may also be capable of designing buildings, it is not being suggested that architects may be dispensed with. All are necessary. The problem is how to make a multi-disciplinary team work creatively, once the general objectives have been appreciated by its members.

No solutions can be offered, but they must be found. However, a start can be made by each concerned making a conscious effort to understand the motivations of his colleagues, and the pressures to which they are subject, and to explaining his own.

One is assuming that in nearly all Commonwealth countries school building is the responsibility of a government department. This makes collaboration more easily contrived, and it also ensures machinery for feedback being possible. For young architects government service often does not possess the glamour or economic opportunities of private practice and, for gifted handlers of form, time spent in getting to know the minds of colleagues in other fields may be considered as time wasted. All means of pressing the available talent into service should be used. It is not necessary even for 100% of all school building to be done by the government. A government organisation is indispensable, of course, but it can utilise, particularly in a school building programme, other resources, including economic ones.

Whichever way one looks at it, the overall problem is not easy. For a city-state, like Singapore, governmental educational objectives might more easily be translated into reality because of shorter physical and mental communication channels. But a small, multi-racial society has pressures to which larger, more homogeneous societies are not subject. A country which is accelerating its pace of development cannot let up, in any direction. Acceleration itself brings its own problems which impinge on the existing ones.

Having had the opportunity to consider one limited aspect of school building, namely high rise buildings, in the Asian region, with particular reference to Singapore, one becomes conscious of the need for some sense of perspective, especially on the part of building designers, and of the need for utilising to the maximum the resources already available.

At the invitation of the Government of Ceylon a UNESCO-sponsored body based first in Bandung, then Bangkok, had a home made available in Colombo. The Asian Regional Institute for School Building Research, which is the body in question, is chiefly interested in school building in a region comprising nineteen countries, twelve of which are in the tropics. Many Commonwealth countries are also in the tropics, and much of the data which the Institute, over the years, has amassed would be of interest to other tropical Commonwealth countries in particular. One wonders, however, whether it is routine practice for ARISBR's publications to reach these countries, and to be studied, and whether in other continental regions like Africa, Canada, and Australia there are bodies performing the same functions. If there are such, one wonders how much of their work is being utilised. By asking a question in this way, the implication is that the answer is going to be in a negative sense. The consideration of high rise school buildings, referred to above, arose because ARISBR had, as part of its interests, become concerned with the amount of land required for school buildings in Asian cities, and wished some thought to be given to one obvious solution, namely, high rise school buildings. Even this apparently straightforward proposition revealed, on examination, many other general school building considerations and special ones related to Singapore itself, apart from the implications of resorting to high rise school buildings.

#### Design effort and expectations

It is not the intention here to reproduce extracts from the study. What might be more relevant is to conclude by a discussion of what is expected of school designers, what is the effect of the performance of their buildings, and the active contribution which school administrators can make in the successful use of what is a costly and immovable teaching aid.

Designers usually assume that they are contributing towards the total built environment something which is going to improve the educational process. The actual influence upon the intelligence of pupils by their surroundings has not been measured, but there is a tendency on the part of the designers to over-rate the importance of the aesthetic environmental climate. In less doubt are the creature comforts which the building designer is supposed to assure, so that at the very lowest, the users of his building have properly lit working spaces, are heated or cooled to an acceptable degree, can hear what they are intended to hear clearly (and are not subjected to unwanted extraneous audio-visual distractions), can see enough to do their tasks properly, and are able to make necessary moves from one point to another conveniently. Finally, his building has to accommodate all the necessary services to enable the building to function and it must allow the educator's equipment to be conveniently arranged. By taking thought, all this can be done within a building envelope which might consist of a more or less permanent part, and parts which can be removed or adapted or improved, providing an upgraded version in terms of performance of the original article.

This is not very difficult to achieve technically, but it does require thought and design effort. The design effort has also to provide for assessment of the functioning of the building, and, assuming a school-building

organisation with a continuing programme, some means of correcting past design inadequacies in future buildings.

It is in the determination of the kind of spaces to be provided and in the use and adaptability of the finished product that is the area yielding the most easily detectable results of a real dialogue between users and designers.

The special user, in a building which provides all the creature comforts referred to and the areas asked for, who is most affected by inflexibility in the usage of space and by inadequate provision for movement is the school administrator, usually the head teacher. A directive coming from the top can pose severe problems to him, if it means that all his carefully contrived movement control exercises are to be done all over again - sometimes they cannot be done at all - satisfactorily, that is.

To sum up, perhaps one might say that even the simplest school building programme needs, right from the time when it is a factor in bigger plans - political, social, economic, and physical - to the time when it has been translated into an instrument in use, the keenest and most imaginative brains which can be found.