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Planning in Education: Local School Buildings

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Buildings, Space And Territory

The physical aspects of schools are often neglected in educational discussions. Buildings and their uses are cultural products embodying ideas and messages which affect social activities taking place within. This is not to suggest that they provide a clear, unambiguous structure but that they set some of the parameters for teaching and learning.

School buildings help to set aside schooling from every day life and perhaps, unintentionally suggest that schools are exclusively about academic learning. Schools are demarcated by bounderies within which different rules apply. They are territories where the general public, often even parents, are kept out and teachers kept in.

Nearly all schools contain classrooms which are based on assumptions about the size of the learning groups and the space required for learning activities. Specialist rooms reflect assumptions about the importance and role of particular subjects and their needs. This implies that education becomes defined as that which can be fitted into the schools and not the other way round. Seperate classrooms also suggest or impose a level of privacy to the act of teaching; an autonomy for the teacher. In many schools, especially primary ones, classrooms become the sovereign territory of particular teachers who display proprietorial attitudes to room and class. The layout of the classroom demonstrates the educational assumptions in the use of schoool space. The traditional typical secondary school classroom with the teacher's desk in the front of the room, at right angles to the door, near the blackboard, indicates who is in control of learning. Communication, interaction and especially spontaneous knowledge sharing may well be inhibited by such a layout.

Fragile furnishings and furniture and the need to protect them induce what might be seen as petty teacher concern with aspects of pupil behavior such as rocking of chairs, leaning against walls and so on. Similarly the poor design and and construction of many schools in comparison with other public buildings often calls for heightened discipline in respect to factors such as safety, noise and interference. Insufficient toilets, lack of unsuitability of accommodation for meals, assemblies and wet break times all produce potential trouble spots and anticipatory action by teachers.

Educational ideas and practice change much more rapidly than school buildings. In fact school buildings have a durability unknown to other buildings; old schools remain in use despite educational changes. However regardless of the architecture people can impose quite a lot of themselves on their surroundings.

Uses and School Buildings in the Community

The majority of state schools in Malta were built in the early nineteen hundreds. Many primary schools were built during this period and include those of B'Kara, Floriana, Għargħur, Għaxaq, Ħamrun, Mqabba, Paola, Qormi, Sliema and Zurrieq. A few others were also built in the period between the two world wars, with the Sliema school having a rectangular shape enclosing a sizable internal yard, used as the prototype.

In the years following the Second World War the Education Department embarked on an intensive rebuilding and extension programme. New primary schools were built in Gżira, Ħamrun, Mellieħa, Marsa, Qormi, Qrendi, Rabat, St.Julians, St.Pauls Bay, Valletta, Victoria and Żejtun.

In the late 1950's and the 1960's a number of secondary schools were built on the separate block system; Maria Assumpta, Santa Theresa and Zejtun are such examples. Whilst the new system was an improverment over the rectangular block type, these schools had large glazed areas leading to over heating in summer and cold in the winter. In 1961 the Upper Lyceum at Msida was built to house the Malta College of Arts, Science and Technology. The San Ġużepp Ħaddiem Junior Lyceum and the trade schools at Corradino were originally built as technical schools.

In the seventies and eighties many military buildings vacated by the British Services were transformed into schools buildings. Amongst these are Sandhurst, Mtarfa, Bighi Trade School, Verdala and Tal-Ħandaq. The first three were ex-naval hospitals whilst the last two beings schools used by the British for the children of stationed military personnel.

Another tradition was to have schools in old buildings. Examples are the Art and Design Centre and School of Art, and the Johann Strauss School of Music,all in Valletta. The Rabat Primary School A (for year 1 to year 3) is a nineteenth century building, although it has been extended and renovated a couple of times.

Originally the majority of primary schools were intended to cater for children of all ages. It was therefore possible to house pupils following secondary education within the primary school precinct. However following school reforms in 1970-1972 primary schools with a relatively large student population were sub divided into two parts:-"A" (year 1-3) and "B" (year 4-6) each having a separate headmaster. At Ħamrun for example the local school comprises a kindergarten, a primary school "A" and a primary school "B" as well as a girls' opportunity centre.

Schools now have various groupings and these vary between different schools. In state schools these range from kindergarten, primary such as the traditional village primary schools to a combination of kindergarten, primary and secondary or opportunity centres, such as those at B'Kara, Ħamrun and Msida (with an opportunity centres) and those at Għira, St. Venera and Żurrieq (with secondary schools). Qrendi, Sliema and Tarxien schools comprise primary and secondary sectors.

By the1970's schools were beginning to be recognised not as finite arrangements of buildings but as local resources potentially available for all. The question was posed whether schools should be open for a small part of society which only includes students and teachers for about seven hours a day and for two hundred days a year; or whether they should be accessible to the total community in many different groupings with different purposes for far longer hours and throughout the whole year. What is important is that schools must be the tools by which the community can benefit from education and vice versa. Very often schools have primary, second, and even sixth forms in the case of private schools, sharing the same facilities and resources which are not often shared by the surrounding communities.

Some schools do serve as a public utility, the few shared resources include libraries, playing fields, halls, and gymnasia. Examples are Floriana Primary and Maria Regina at Blata l-Bajda, which are used as centres for evening classes. Many schools are also used as examination centres such as Maria Assumpta Girl's Secondary at Ħamrun and Victoria Boys Junior Lyceum. While few primary schools have gymnasia, many secondary schools are equipped with these as well as extensive sports grounds which are used by local sports bodies after school hours. Maria Regina, Maria Assumpta and Santa Theresa girls' secondaries in fact share their gymasia with various sports clubs, while Siġġiewi Primary, Verdala and Ħamrun Junior Lyceums share their playgrounds with various other sports clubs.

On the other hand the Victoria Boys Junior Lyceum and Secondary School use the Gozo Sports complex. The Lija Primary, Żejtun Girls' Junior Lyceum, Mellieħa Primary and San Ġwann Primary use nearby football pitches. The Rabat Primary uses the Rabat Parish Hall. Resources are also shared between different schools such as the case of San Miguel Ferres Condero Special School at Pembroke which uses the home economics rooms of Bice Mizzi Vassallo Girls' Trade School .

It is a fact that in general school buildings remain in use longer than other types of buildings. Locally the situation is such that old buildings are predominant, as previously described, and so schools cannot keep up with changes in education and this seriously hinders the educational process. In spite of this, modifications can be made such as the Gucja Primary School where the school hall was partitioned and is now used as classrooms. It therefore depends on the individuals in charge of the schools to adapt themselves to changes in education.

The advantages of shared resources are that a closer bond is created between school and home, parent and teacher, teacher and taught, school and community. The school is provided with a wider range of human and physical resources if there is ready access to community centres. The express intention of making education premises more widely available to the community is a goal to be aimed for, particularly so when land and building resources are in a very short supply.

The following policies attempt to address the issues outlined above:

1. All new schools should ideally be designed to allow for extended use of facilities outside the school

hours for further education, local youth clubs and the community in general.

2. To encourage the dual use of both the community and the school facilities in order to secure the maximum benefit to both the school and the local community.

3. Dual use of new and improved school buildings will provide valuable opportunities to meet local needs (such as assemblies, recreation etc.), but the problems of achieving this policy in the case of older schools premises are recognized. Adequate school facilities which suit this purpose should be opened up for the community.

4. As schools would, through the multiple use of their facilities, become meeting places and focus for various community activities and events, they would contribute to the development of community feelings especially in new areas. The community use of school facilities may cause certain management problems, which, however, could be overcome if suitable arrangements are made between the school or the Education Department and the local community representive. Provision should be taken in this regard.

5. In all school development, public or private, the following could be satisfied:

(a) Community needs.
(b) Accessibility to the Community they will serve.
(c) Good and safe vehicular access and adequate on site parking with particular attention paid to the safety of pupils
(d) the need to avoid detrimental effects on nearby properties or amentities.
(e) High standards of design and layout.

School Areas

A study was carried out on several local state schools to determine schools areas and student populations. These parameters were compared to Italian standards. The need to compare the local situation with foreign ones was felt to be important in helping to evaluate the local situation.

The Italian codes were chosen for comparative purposes as they prove to be the nearest to the local situation. This way comparisons were not made with idealistic states but with those that are not difficult to achieve. It is worth nothing that even many of the Italian schools do not attain the levels set out in these standards. The latter are more intended for schools yet to be built rather than those existing.

The main objective of the comparison of the local schools to Italian standards was to ascertain whether the present school premises footprint area holds enough potential to contain the present school population, if exploited to the maximum permitted by modern standards. The schools considered in this exercise are listed in tables 1, 2 and 3 namely:- enough potential to contain the present school 26 primary schools; 4 primary and secondary schools, and 17 secondary schools respectively. Results reveal the schools' footprint area, the number of students as in 1991 and where possible the number permissible by Italian standards as well as the ratio of the actual student population to this bench mark.

Considering primary schools (table 1) the two schools with the highest population are those of Mosta and Fgura. However while in Mosta they are packed in a mere 1,750m^2, in Fgura they are hosted in a 10,200m^2 premises. The densest school population however was that of Cospicua with 0.86 students per m^2 of school, followed by Mosta with 0.71m^2 . The sparsest school populations were registered in Qala and Xgħajra. The median of the density of the sample was 0.09./0.10 as seen at San Ġwann, Sliema, Luqa, Siġġiewi and Floriana.

The minimum permitted area for a school in Italy is 2,295m^2 which would hold 125 students. Five of the considered primary schools have a smaller area than this permitted value. The smallest, the Cospicua primary school with a footprint area of 925m^2 and a population of 797 students should by Italian ratios host only fifty students considering this particular site. In fact from the sample of schools investigated, the Cospicua Primary School was the worst off housing 1594% of the numbers allowable by Italian Standards. The discrepancy is reflected by such major shortcomings in the school such as lack of any recreation grounds for school B (grades 4-6). Most of the schools having less than the minimum area by Italian Standards have a high ratio of existing to permitted student populations.

On the other hand a number of schools investigated are underpopulated. The most prominent example is the Xgħajra Primary with only 29% of the allowable population and the Qala School with 43%. The Xgħajra school is only one storey high and the ceiling does not permit additional stories whilst the Qala school has substantial open spaces and a marked scarcity of use.

In certain cases finding a solution for, or integrating the present adverse conditions can be rather

straightforward whilst in others it is not so simple. In cases of a heavily urbanised context it is lack of space can be
outdone by more imaginative design such as using the roof of a school for recreational purposes, once rendered safe.

The general tendency is for schools to be overcrowded, with areas which are totally inadequate to house their student population by these standards. Even if these schools were to be demolished and rebuilt the footprint area they take is insufficient to house all the locality's student population by standards which are modern but not out of reach.

Indeed the standards for primary schools as set in the Explanatory Memorandum of the local structure plan give similar standards of key. The medium level for primary schools require 0.70 hectares for 360 pupils i.e. 2 classes per year for years 1 - 6 whilst the Italian standards ask for 0.77 hectares for 540 pupils i.e. 3 classes per year for years 1 - 6, both the local medium level and the Italian standards specify 1:10 hectares. 550 pupils in Italy would have to be provided with 1.12 hectares whilst locally the requirement is per 2.20 - 2.50 hectares if the high level is contemplated.

The secondary schools were more difficult to evaluate by Italian standards due to the Italian Educational Structure. Following the Scuola Elementare, equivalent to the local primary level, are the Scuola Media (approximately Forms 1 - 3) and then the Licei and the Istituti Tecnici, (forms 4 to 6). The Italian Standards give separate figures for these two levels of school. The Scuola Media are only considered viable for at least six classes i.e. two per year, whilst for the higher levels of education the schooling establishment must be larger to justify additional costs incurred for the more extensive equipment necessary for this level of schooling. Evaluation in Italian standard terms was not straight forward and where possible comparison was made with the Scuola Media figures as the latter stages of the Licei are more demanding than the local forms 1 - 5.

The scuola Media/Licei figures could not be combined and averaged as that would have implied a degree of duplication of facilities that are common to both. Likewise local schools which host both primary and secondary classes could not be evaluated.

Moreover of the thirteen strictly secondary schools in table 3 only four had areas which fall within the limits as set by the Italian standards. TheŻebbuġ secondary school with 2,275m^2 falls below the 4,050m^2 minimum area. This minimum should cater for 150 students for six classes: 2 per year for forms 1 - 3. This is justifiable for Italy which might have communities living in remote localities which would still have to be offered a secondary school albeit a small one. However two classes per year at secondary level is beyond justification locally where traveling is much less of a problem than availability of resources. Most of the local secondary school surveyed were much larger than the maximum Italian standard specified of 12,600m^2 with 600 students i.e. 8 classes per year for the equivalent of Forms 1 - 3. This figure was often excessively exceeded (eg. Verdala Junior Lyceum). In these cases the school density becomes less decisive than the type of facilities the maximum Italian standard specified of 12,600m^2 with 600 students i.e. 8 classes per year for the equivalent of Forms 1 - 3. This figure was often excessively exceeded (eg. Verdala Junior Lyceum). In these cases the school density becomes less decisive than the type of facilities being offered, and the distance traveled by the students. Amongst the larger secondary schools were British buildings originally built to serve different functions. The Verdala School was originally a group of navy barracks, Sandhurst had been a British hospital, and the Tal-Ħandaq Junior Lyceum an Anti-Aircraft headquarters before being turned into a school for naval children.

The average area for area secondary schools, omitting the combined Secondary Primary schools in table 2 and the Victoria school, was considered, (barring the Maria Assumpta Area Secondary, which has a formidable area of 48,050m^2). The average area of the rest of the area secondaries was of 5850m^2. The mean area for the Junior Lycuems on the other hand was of 29,150m^2. It can be concluded from this that Junior Lyceums tend to be much larger than the Area Secondaries. The latter are intended to serve a specified catchment areas. These catchment areas are much smaller than those of the Junior Lyceums.

There are however much fewer Junior Lyceums but these have much higher student populations. However incurring large sums to procure more specialised equipment is feasible only for a larger number of users. The Area Secondaries, due to their smaller area, would probably be rather short of modern equipment for specialised or out of the ordinary subjects.

Table 1: Primary Schools

Name of School	SCHOOL Area in m^2 (to nearest 25)	NO. OF STUDENTS	PERMITTED NO. OF STUDENTS BY ITALIAN STANDARDS	RATIOS OF COL. 3 TO COL. 4	SCHOOL DENSITY (Students per m^2 of schools footprint area)
Cospicua	925	797	[50]*	15.94**	0.86
Mosta	1750	1249	[95]*	13.15**	0.71
Żabbar 'A'	2675	915	146	6.27	0.34
Senglea	1500	486	[82]*	5.92**	0.32
Victoria	2050	636	[112]*	5.67**	0.31
Żabbar 'B'	2300	617	125	4.94	0.27
Rabat 'A'	3675	602	200	3.01	0.16
Rabat 'B'	3450	433	188	2.30	0.13
Fgura	10200	1080	497	2.17	0.11
Gudja	2600	281	142	1.98	0.11
Siġġiewi	6750	688	309	2.22	0.10
Luqa	5225	518	243	2.13	0.10
Floriana	2325	227	127	1.79	0.10
Sliema	5850	518	260	1.99	0.09
San Ġwann	8125	731	384	1.90	0.09
Vittoriosa	3200	262	174	1.51	0.08
Msida	9075	607	436	1.39	0.07
Baħrija	2000	121	[109]*	1.11**	0.06
Lija	9130	484	439	1.10	0.05
Kalkara	5675	272	250	1.09	0.05
Mġarr	4075	203	222	.91	0.05
M'Scala	4900	215	238	.90	0.04
Mellieħa	10650	390	522	.75	0.04
M'Xlokk	7925	312	373	.84	0.04
Qala	6600	129	301	.43	0.02
Xgħajra	3400	54	185	.29	0.20

[] i.e. No. of students worked out by simple proportion even if by Italian standards this area is insufficient to function as a school. Min. area by Italian standards = 2295m^2 with 125 students, (1 Class per Year).*

** *i.e. figure in [] was considered.*

Note: Italian figures for *scuole elementare* were considered. Actually all school A's include a Kindergarten and these have specific standards in the Italian codes as for *scuole materne*. These standards are even more stringent than for the *scuole elementare*. Except for School B's, all schools comprises a kindergarten.

List of Secondary Schools Surveyed

Santa Venera	Vinċenzo Buġeja School
Tarxien	Maria Goretti School
Żurrieq	Mons. P.P. Saydon School
Gżira	Antonio Bosio School
Żebbuġ	Dun Karm Psaila School
Rabat	Kan. Pawl Pullicino School
Cospicua	Erin Serracino Inglott School
St.Andrew's	Luigi Preziosi School
Ħamrun	Maria Assumpta
Victoria	Ninu Cremona Junior Lycuem
Blata l-Bajda	Maria Regina Junior Lycuem
Ħamrun	Dun Guzepp Zammit (Brighella) Junior Lycuem
Mrieħel/Birkirkara	Santa Tereża Junior Lycuem
Żejtun	Carlo Diacono Junior Lycuem
Tal-Ħandaq, Qormi	Mikiel Anton Vassalli Junior Lycuem
St.Patrick's Pembroke	Sir Adrian Dingli (Sandhurst) Junior Lycuem
Verdala, Cospicua	Ġużeppi Despott Junior Lycuem

Table 2: PRIMARY cum SECONDARY SCHOOLS

Name of School	SCHOOL AREA	STUDENTS			SCHOOL DENSITY (students per m^2 of school footprint area)
		PRIMARY	SECONDARY	TOTAL	
Santa Venera	12800	641	413	1054	0.08
Tarxien	11525	641	465	1079	0.09
Żurrieq	7350	1076	227*	1303	0.18
Gżira	4725	470	360*	830	0.18

**Only Forms 1-3 at this school*

Table 3: Secondary Schools

Name of School	SCHOOL Area in m2 (to nearest 25)	No. OF STUDENTS	PERMITTED NO. OF STUDENTS BY ITALIAN STANDARDS	RATIOS OF COL. 3 TO COL 4	SCHOOL DENSITY (students per m^2 of school footprint area)
Area Secondaries					
Żebbuġ	2275	463			0.20
Rabat	7475	725	335	2.16	0.10
Cospicua	5200	294	211	1.39	0.06
St.Andrews	8500	236	392	0.60	0.03
Maria Assumpta	48050	1224			0.03
Area Secondary + Junior Lycuem					
Victoria	7900	1047 (258 + 789)	354	2.96	0.13
Junior Lycuems					
Blata L-Bajda	23400	1367			0.06
Brigella	18225	1164			0.06
Mrieħel	21000	1083			0.05
Żejtun	17900	868			0.05
Tal-Ħandaq	34300	1182			0.03
Sandhurst	36400	1165			0.03
Verdala	52900	553			0.01
max. area= 12600 with 600 students.	min. area = 4050 with 150 students.				

School Maintenance

All buildings like most other artifacts begin to deteriorate as soon as they are completed. Even if they are never used or occupied, the climate alters chemical and physical properties and the decline, however gentle begins. Imagine then the maintenance required for a typical, heavily populated Maltese school.

School maintenance budgets should not be designed solely for keeping buildings clean, but also to keep buildings in a state of good repair. When the question of expenditure for education comes up there is always the cry for holding the line on maintenance costs even though the cost of maintaining our schools is very small compared to other forms of expenditure.

A school building may be redesigned to make it easier to clean. Windows may be eliminated because they get dirty and cost money to clean. There may be good reason to make these changes but ease of maintenance should not necessarily be one of them. Schools should not be built solely for this ease of maintenance or materials chosen solely because they are easy to clean. Schools should foremost meet our educational specifications and the cost of maintenance, though important, should be a secondary consideration. None the less lack of maintenance will lead to deterioration of the building and at a certain stage this will affect the educational processes held within such a building. Therefore a balance must be reached between educational costs and maintenance costs.

Maintenance however is not easily defined and described, its aim should be to keep buildings in a recognisable good state of repair. Maintenance work covers a range of approaches from the long term maintenance plans set out over the years to replace worn or defective materials to the everyday minor work required to keep a building or a service in use, affording security and certainty to the user.

When a large number of buildings are under one ownership and used for similar purposes there are many advantages to be gained in cost and services from an established partnership between the user, the owner, the designer and the maintainer. The user may state his requirements, the owner sets his levels of expenditure and general policy, the designer assesses previous building performance whilst the maintainer provides care of the fabric and service installations. Knowledge of a particular building type is invaluable for maintenance and this explains how service might be approached for schools.

By decentralising the maintenance organisation, the local building user is brought into close contact with the local maintenance officers (who carry out normal maintenance and regular inspections) and becomes known and knowledgeable. In this way the scale of numbers and areas, instead of being just statistics, are transformed into informal and mutual trust.

Locally the maintenance system for school buildings is centralised where everything depends upon the head office. Every year the headmasters are asked to send their requirments in writing to the Education Department. These usually consist of maintenance and repair works, building extensions, furniture provision, stationery requirements, text books, teaching aids, equipment and other materials. The provision of materials and other perishable requisites is possible through an application form made for this purpose which enables the Assistant Director to give the heads of schools a capitation which is allocated to each student and school on the basis of average cost per head. The Assistant Director then passes these forms to the respective sections in the Education Department so that they can be included in the Estimates of Expenditure of the Department of Educaton. Small allowances are also allocated for each school to cater for its immediate needs concerning small items, minor maintenance works and provision of materials to keep laboratories running etc. A percentage of money from tuck shops on school premises is also used to augment the above mentioned small allowance in these schools. Some schools also organise their own fund raising by holding their own small lotteries etc.

Curiously enough the Education Department pays annual rates to the Lands Department, these being due to its schools and other premises owned by the Department. These amount to about Lm1,120,000 annually which is equivalent to about 20% of the total operational expenses of the Education Department.

At the time of research for the study there were two architects responsible for maintenance and construction of school buildings. One architect, in charge of the maintenance unit, is responsible for repairs, decorations, electrical installations, tiling and minor extensions of all the Departments premises. The role of this unit was previously undertaken by the Works Department which was much more equipped for these types of jobs. The second architect is responsible for designs, building specifications, construction of school buildings and extension projects as approved in the estimates of the Government Expenditure in the Education votes.

Many state schools exhibit a state of disrepair and general neglect. Although as stated previously it is difficult to define maintenance and even more difficult

to establish its costs, this is no excuse for the local situation. From surveys carried out it was noted that all state schools lack maintenance. In fact some of the schools constructed in the first forty years of this century are heavily deteriorating where parts of the building were falling apart besides problems with damp. This lack of maintenance and state of deterioration are hindering the educational process. This statement was further supported by answers given by students and teachers in a questionnaire presented to them. The surveys also showed that there is no idea of long term planned maintenance to prevent building material deterioration. Moreover short term maintenance to the minor every day works lacked co-ordination.

The surveys and inteviews carried out also established that the maintenance unit within the Education Department knows clearly enough what is happening in all schools and this is supported by the fact that it has prepared a detailed business plan outlining the priorities to solve immediately.

The maintenance problem is not with having all these schools to cater for but in having lack of finances allocated for their upkeep. The local maintenance system has further problems in that it is centralised and consequently subject to the whole bureaucratic process and all the disadvantages it brings with it, such as slow action and inefficiency.

Partial independence to individual schools in both finance and maintenance officers including staff provides immediate action to an immediate feedback. However there must still be continuous monitoring and assessment from the control maintenance unit hence the term partial independence. Locally there is an attempt to have such a framework but individual schools are provided with only a negligible sum of money and with no maintenance staff at all.

A forecast of the maintenance costs of each school building is very important, and through the use of computers a profile of the maintenance annual cost could be achieved. Such a system, if introduced locally could assess whether it is viable to continue spending money on maintenance or else to do away with the building and allocate money for a new building. This is also a method to formulate priorities regarding schools which badly need maintenance and restoration.

As previously mentioned twenty per cent of the total operational expenses of the Education Department are paid to the Lands Department for the premises it occupies and for all the schools. Another problem is that there are about 200 people allocated to the maintenance finances. This money spent on wages could be curtailed in favour of materials. The maintenance unit also lacks sufficient professional staff.

A whole restructuring programme of the maintenance unit has now been undertaken and attempts are being made to have an efficient allocation of resources and workers. A business plan has been made setting out to co-ordinate works, putting emphasis on major long term problems while not ignoring requests for minor urgent works. In this way the small amount of finances allocated to maintenance could be used with greater efficiency.

General maintenance polices to consider

1. The Education Department should ensure that school premises are properly maintained, so as not to threaten in any way the health and safety of pupils and teachers.

2. Maintenance provision should be such as to keep the school environment inductive to optimum communicaton between teachers and students.

3. The maintenance sector is to become more efficient and effective, and the upkeep of schools should be constantly given attention. A yearly plan of action should be drawn up by this sector, naturally allowing for any contingencies which might arise.

4. A handyman could be employed in large schools (particularly secondary ones) to look after day-to-day requirements. In the case of smaller schools, a handyman could be detailed to take charge of a region.

5. As problems are being found to effictively maintain and clean schools, the Authorities may either employ full-time staff - this staff can be directly controlled, but would find difficulty to work during school-hours; or it may employ part-time staff - this entails less direct control and its supervision may be difficult, but it takes place after school-hours; or an external agency whose standards depend on the particular companies used.

6. Large maintenance projects can easily be conducted during vacation time.

7. The extent of the maintenance works required and its related costs should be established

before any new school is built. This process could be achieved more efficiently by using appropriate computer software a is currently being employed elsewhere.

The School's Physical Aspect And Location

Having discussed school buildings in the community, school 'footprint' areas and school maintenance, the physical aspect of schools as well a their location warrant consideration.

In an island where land and natural resources are in short supply it is very important to ensure that maximum advantage is obtained of the existing educational facilities, while taking into consideration levels and distribution of future population growth especially when considering the provision of additional new schools. The following policies attempt to address such issues and other factors which influence the location of schools and their physical aspects.

Policies regarding location of schools

1. In considering locations for education provision, regard will be paid to the likely levels and distribution of future population growth and to the other factors identified in the Structure Plan as influencing the future development of the communities concerned; the demographic mechanisms of the respective localities should be constantly monitored.

2. Local plans should take full account of education requirements as specified in the Education Development Plan which should be drawn up in accordance with Policy SOC 10 of the Structure Plan of the Maltese Islands.The Planning Authority should consult the Education Department regarding sites identified to ensure that schools designated in the Local Plan can satisfactorily accommodate anticipated changes in their catchement area. At the same time is recognisedthat the Education Department may, duringthe Plan period, review its existing land requirements.

3. To provide additional new schools where there is a proven need which cannot be met by existing schools. This need will occur in areas of expanding population, resulting from new housing development on a significant scale. The Structure Plan for the Maltese Islands mentions Qormi, Gudja, Marsascala, Marsaxlokk, Mosta, St. Paul's Bay as areas of greatest population growth requiring new Primary Schools.

4. Additional new school provision will be necessary to replace redundant and obsolete premises where resources allow, but the main areas of need will be on the urban peripheries where the majority of new housing development is expected to take place. Both the Education Development Plan and the Local Plans should provide the necessary school facilities for these peripheries.

   a) Whenever practicable to remodel and improve existing substandard school buildings in preference to providing new premises;

   b) Whenever possible to safeguard vacant land adjoining existing school buildings in need of improvement, in order to allow for possible expansion of facilities, including recreation areas;

   c) To provide the new facilities including those for further education and industrial training where there is a proven need which cannot be met by existing provision, or where existing buildings fall below the minimum requirements set out in the explanatory memorandum of the Structure Plan;

   d) The joint use of educational facilities should be encouraged and should not be neglected in future provision of buildings and other facilities.

5. Policy SOC 10 of the Structure Plan recommends that school facilities should be confined within the existing Temporary Provision Schemes.

RECURRENT EXPENDITURE ON PROVISION OF EDUCATIONAL SERVICES: 1980 - 1990											
(All in figures in Lm)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Personal Emoluments	1029999	11897836	13603892	1338336	1215218	13112656	13524438	14426736	15508184	17385185	18242350
Oper. & Maintenance *	1096769	1499738	2578649	2671920	2583406	2596590	2711814	2728808	2970495	3164552	3660863
Reccurent exp. on public educ.	1256099	14744649	17700771	1739600	1610133	17109231	17314252	18592544	20044679	25536308	24503213
Contribution to private schools.							262333	301667	600000	1010000	1704668
Total Reccurent exps. on educ.	1256099	14744649	17700771	1739600	1610133	17109231	17567585	18894211	20644679	23546308	26207881
Operational & maintenance exps: Utilities, maintenance & supplies											
Primary Schools	63870	91761	75751	81643	98167	82541	101408	99996	136731	100997	
Secondary Schools	122298	212303	167746	144154	189259	154679	151013	154390	220319	273741	
Repair & Upkeep	47445	72868	85201	90975	64127	56284	74394	95234	311321	136325	151131
Trade Schools	148579	173759	204862	173310	168788	218683	260939	276735	322554	346090	447140
Special Education	56914	57495	66888	74822	69145	84613	82902	87465	93580	105919	137105

* Excluding University

However, the Schemes are not catering for this policy, because:

a) Land has already been subdivided as plots for housing;

b)Land reserved for social and community facilities is not easily accesible from all parts of the village.

When possible, new school sites should be located within the Schemes. When this is not possible, school sites should be located just outside the Schemes.

6. In the consideration of proposals for housing development, account will be taken of existing and proposed primary and secondary school provision. Where the presence of a new housing devolpment might enable a school to become viable, this should be taken into account. At a more detailed level , Local Plans will provide for new residential development to be sited within easy walking distance of an existing or new Primary School. Similarly, where new Primary Schools are to be built, every effort will be made to site them so as to give easy and safe access from the neighbourhood they serve.

7. It is important to take into account possible planning considerations which arise from variation in the size of school populations. Alteration, expansion or even change of use may arise due to population fluctuation. Thus expandability, convertibility, mobility and versatility factors must be present in the schools.

8. The emphasis of the development strategy for major urban areas will ensure that maximum advantage may be taken of existing stock of educational facilities. This is particularly important both in view of the shortage of public funds for new buildings and since over the medium term the proportion of the population of school age is likely to fall because of the declining birth rate.

Policies regarding the schools physical aspect

1. In considering planning application for the devolpment of redundant educational building the following clauses may hold:
   - It would normally be required to house an alternative educational use rather than forming other types of devolpment

   - Only permit a change of use of the existing buildings to residential or other appropriate use where:

   a) The applicant has demonstrated the satisfaction of the Planning and educatonal authorities that an educational use is not practicable, and
   b) The other policies of the Structure Plan and Local Plans (when completed) are complied with and, in particular,
   c) The proposal will not have an adverse environmental impact on the surrounding area.

2. Some of the Island's schools and other educational buildings are no longer adequate for their purposes. This applies particularly to old buildings which are still in use, despite falling short of today's standards and requirments. Thus, while priority will continue to be given to building projects in growth settlements it would be necessary to maintain a programme of replacement of unsatisfactory older school buildings.

3. Education is constantly developing and will continue to do so. This development is multi-faceted, and its effects on school accommodation are various. Therefore school buildings may be:

   a) Flexible; in the sense that as far as possible their various parts (communal areas as well as teaching rooms) should be capable of serving in day-to-day use more than one purpose.
   b) Adaptable, in the sense that is should be possible to cater for internal alterations.

c) Extendible, in the sense that, if and when additional accomodations are required, they can be extended in such a way that the extended buildings remain a reasonable coherent functional unit.

4. The general aim of the architect planning a school would be to provide a building which will:

a) Fulfill its function of housing a sound education organisation, by offering suitable conditions for efficient work and by ensuring care and economy of movement about the school;
b) Provide good standards of physical comfort for both pupils and teachers;
c) No matter how subdived for one purpose or another it should have an architectural unity in keeping with and contributing to the development of a closely knit community within the school.
d) Afford an aesthetically pleasing environment which will help to cultivate visual awareness and appreciation in the pupils and at the same time fit well in the surroundings and enhance the general appearance of the area.

5. School building should be safe and attractive in overall design and functional in layout; they should lend themselves to effective teaching, and to use for extra-circular activities and, especially in rural areas, as a community centre; they should be constructed in accordance with establish sanitary standards and with a view to durability, adaptability and easy, economic maintenance.

6. Schools should not be too large, as some local examples are (refer to analysis: School Areas), since this makes the fostering of a community spirit a difficult task. It is recommended that not more than 3-4 classes per Form/Year should be available. Secondary schools would generally tend to have a greater population than Primaries to make them feasible. Moreover, the total Primary School populations should ideally not exceed 600 students and the Secondary Schools, 1000 students. The medium levels as stipulated by the Explanatory Memorandum of the Structure Plan are appropriate and conform to international standards.

7. The possibility that the number of children in normal classes should not exceed 25 can be considered. The present norm of 30 children per class is a rather high figure to allow for personal attention to be given individually. The present National Minimum Regulations stipulate 30 students per class but these Regulations are outdated in many respect, and need thorough revision.

8. The schools' enviroment should be modernised. Class furniture needs to be modern and attractive, while obsolete or unserviceable items should be substituted so as to produce a pleasant environment. The size of the classrooms should be sufficient so as not to be overcrowded, and space should be allocated for activities beyond the desk area. Classrooms should be adequately acoustically insulated to eliminate interference in the educational process.

9. Planning should take into account the process of educational change. This may arise from new developments in teaching processes, as well as the introduction of new teaching techniques. The forecasting of future student populations must be continuous.

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