



Master of Architecture Thesis

THE INFLUENCE OF ARCHITECTURAL DESIGN IN THE  
ENVIRONMENTAL DEVELOPMENT OF SOUTH AUSTRALIAN  
SCHOOLS

by

Valery Mohyla B.Arch. (Adel); A.R.A.I.A.

Department of Architecture and Town Planning  
The University of Adelaide

August 1976.

I N D E X

<u>SECTION</u>	Page No.
1.0 INTRODUCTION.....	1/4
2.0 HISTORY.....	5/6
3.0 EDUCATIONAL DEVELOPMENTS LEADING TO OPEN PLAN SCHOOLS.....	7/9
4.0 DEVELOPMENT.....	10/13
5.0 CHANGE (1975).....	14/18
6.0 INDEPENDENT STUDY.....	19/20
7.0 TEACHING.....	21/24
8.0 PRESENT ACTIVITY PATTERNS.....	25
9.0 OPEN PLAN - WHY?.....	26/28
10.0 PRESENT EDUCATIONAL OBJECTIVES.....	29/32
11.0 DESIGN DEVELOPMENTS - EDUCATION/DESIGN....	33/39
12.0 INITIAL DESIGN PROPOSALS.....	40/42
13.0 DESIGN DEVELOPMENT OF A NEW PRIMARY SCHOOL.....	43/46
14.0 DESIGN DEVELOPMENT OF A SECONDARY SCHOOL PARA VISTA - PARA HILLS.....	47/48
15.0 ASSESSMENTS OF QUESTIONNAIRES, PERSONAL SURVEYS - DISCUSSIONS AND MEETING WITH RESPECT TO OPEN SPACE EDUCATION.....	49/57
16.0 NOTES FROM MEETING OF APPROXIMATELY 100 TEACHERS EDUCATORS AND ARCHITECTS HELD AT THE CAMPBELLTOWN OPEN UNIT.....	58/65
17.0 REVIEW QUESTIONS.....	66/78
18.0 STAGE III - SUMMARY AND PROPOSALS.....	79/88
19.0 THE FORMATION OF THE SCHOOL'S ENVIRONMENT.....	89

<u>SECTION</u>		Page No.
20.0	THE INFANT SCHOOL.....	90/92
21.0	THE PRIMARY SCHOOL.....	92/94
22.0	THE SECONDARY SCHOOL.....	95/99
23.0	CONCLUSION.....	100/101
24.0	WHERE TO - REACH OUT SCHOOLS - OPEN CAMPUS.	102/106
25.0	APPENDIX.....	107
26.0	BIBLIOGRAPHY	
27.0	ABSTRACT.....	108/114

\*\*\*\*\*

### ACKNOWLEDGEMENTS

The Author is deeply indebted to his Supervisors, Mr. A.J. Gillissen, Mr. H.H. Gray and Mr. D. Anders, for their valuable guidance throughout the course of this research.

My thanks are also due to members of the Education Department, Public Buildings Department and the S.A. Council for Education Planning and Research for their help in numerical analysis during the various stages of this work.

I also wish to thank my colleague, Mr. D.G. Risbey, and various members of the 'Peter Falconer Group' for their help, given in the form of suggestions, materials and valuable discussions.

For their help, patience and understanding during the course of this work, the Author is extremely grateful to his wife, Kay and Mrs. 'Norma' Arbon.

1.0 INTRODUCTION

- 1.1 Education in South Australia and overseas is changing in many fundamental ways.
- 1.2 Some of the past practices of teacher imposed discipline upon the child are being replaced by the teacher providing opportunities for the pupil to discover and experience facts by his own activity. The students can progress at their own pace.
- 1.3 There is, because of this, a need to make available specialist knowledge and techniques posses by individual teachers to the larger school community rather than restrict it to a relatively smaller group - the class.
- 1.4 This different approach has made it necessary to modify current classroom practices, e.g. Team Teaching is a growing practice as this allows larger class grouping for specialty teaching where required.
- 1.5 Although learning cannot be directly produced through design, design of facilities can create a happy environment for effective learning. It has been observed by educationalists and researchers from pupil and teacher reaction that, when motivated and given adequate facilities, children are able to pursue their interests and activities to deeper levels and for longer periods of time than previously thought possible. The timetable has become more flexible as children tend to subdivide into small activity groups or form into large groups for different activities with personal involvement as the keynote for their work.
- The teacher's approach is such that they act as guides for the individual's learning process, working as a team, moving along the smaller groups or perhaps taking as many as a hundred for a specially prepared

lesson using audio-visual material or demonstration techniques.

i.e. The aspects of schooling with the most obvious implications for facilities are the logistical elements, the parts you can kick with your foot, or photograph, or time with a stopwatch, places, people, resources and time.

1.6 These conditions require schools with a different design concept from the traditional which were suitable so long as each teacher remained isolated with a single group of 35 or 45 children in a 'formalised' teacher dominated situation.

1.7 Architectural design has become increasingly important in South Australian education. Since 1956 architects and educators have collaborated in an attempt to design schools which provide an environment that stimulates growth of the pupils' interests and activities.

In a school environment useful and usable 'space' is always priority - appropriate space for appropriate activity - space to write, to draw, to paint, to read, to experiment, to build, to measure, to dance, to make music, to hammer and saw. Space for children to project their own slides, listen to portable tape recorders, collate their gathered materials for science, model with clay or cook.

Thus school building design, rather than dictating any particular instructional pattern or technological system, should be highly adaptable to the educational needs of the particular people who will use them; the school must provide spaces that can form large spaces and small bays, places to be quiet and places to be noisy. Hard surfaced floors unaffected by water and clay, soft comfortable floors for sprawling with a book - whoever saw a child engrossed in a book on an uncompromising hard upright chair?

- 1.8 Designers must attempt to improve the spaces they create acoustically by absorbing unwanted sound.
- 1.9 Furniture - light, portable, strong and versatile is an integral part of the design of such a school, for what good is building flexibility if the desks need two strong men to shift them?
- 1.10 New schools designs should be appropriately developed to assist teachers in their new approach to education. For the school of traditional design makes difficult the changes that must occur in teaching methods to give effect to a different approach to curricula and to a new conception of what aims of education are necessary,

2.0 HISTORY

2.1 Teaching practice during the past decades has tended to be teacher dominated and the curriculum was very rigid, but now, although education still tends to be dominated by external syllabus, there have been radical changes.

2.2 Looking at the development of schools through time it appears that methods in education have done a full cycle, i.e. with regard to teacher/student relationship.

Originally Socrates the "one tree".

"One student, one teacher, one tree.  
Square foot per student: the whole  
wide world of ideas." (1)

This method of teaching developed through the ages until the middle 12th Century when the one room schoolhouse came of age - this consisted of:

"One teacher to as many students as  
would fit. Square foot on top of  
round foot, elbow to elbow, knee  
to knee." (2)

The one room schoolhouse paved the way for mass education, the classroom and graded school; this was about the middle 17th Century and it consisted of several classrooms, an assembly hall and a Principal's office.

"Fifty to sixty students per room,  
15 sq.ft. per student, desks bolted  
to the floor. The pupil sat  
passively and watched the instructor  
write on the blackboard." (3)

The surrounds of this type of school usually consisted of only an asphalt playing area fenced off from the public. There was no planned ratio of playing to building area.

In the early 20th Century the "Quincey Plan" for schools was evolved. The Plan consisted of classrooms strung out along a corridor.

This type of design for obvious reasons lacked flexibility and was described as a:

"much maligned egg crate" (4)

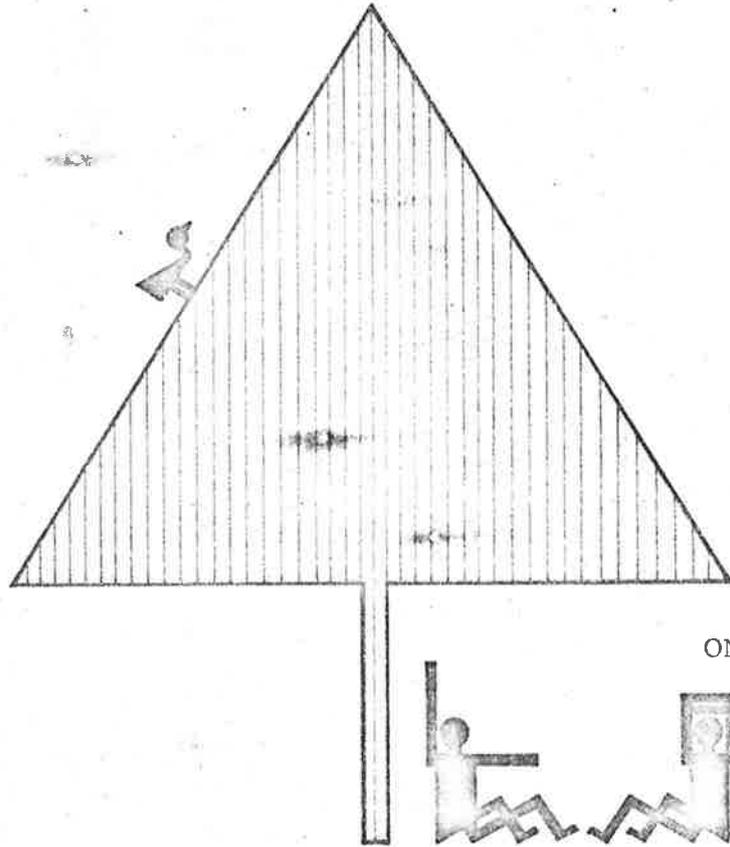
The space allowed for students in this type of school plan was 80-100 sq.ft. The Quincey Plan was the basis for Australian education to the present day. Flexibility was introduced into the Quincey Plan by the advent of folding and movable walls and this led to the possibility of having small, medium or large groups in the one space. Education now took a turn towards experimentation, investigation, discussion and evolution.

The plan of the school was still basically Quincey. The present day tendency is for school rooms and classes to become more as one and this is leading to the formation of common learning spaces and ungraded classes where the student will be the individual learner and he himself will time his own instruction time. Because of this the physical form of schools has become more important in an attempt to assist the trends in new teaching techniques and changes in use.

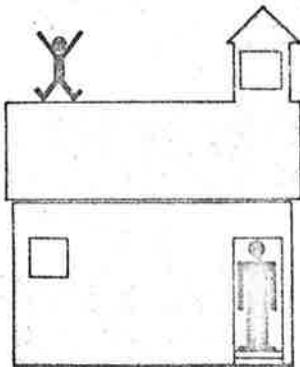
Then again the "one tree"?

"Television mast, square foot per student, the entire wide transistorized, transmitted telegraphed televised world. Responsibility for equal learning despite social inequities. Pre-school learning, self help and adult education. Education for a lifetime - the total environment as the School." (5)

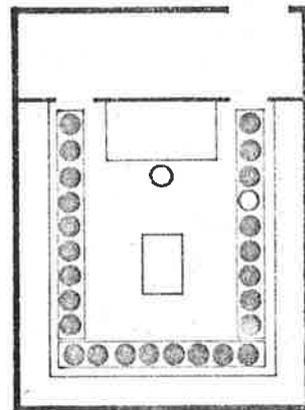
# CHANGE AND MORE CHANGE



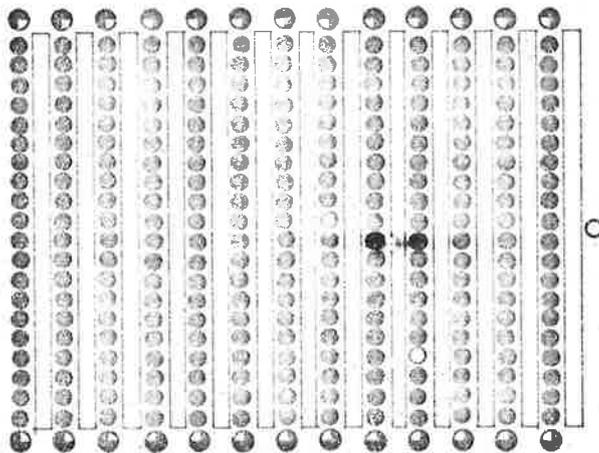
ONE STUDENT, ONE TEACHER



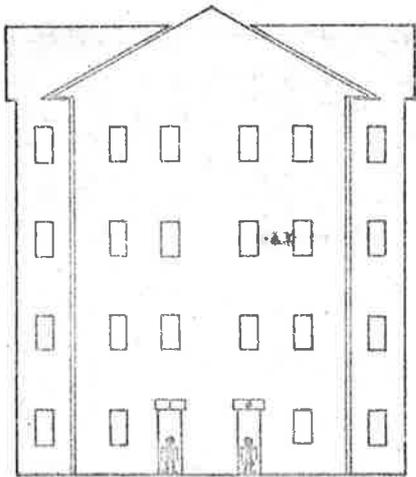
ONE ROOM SCHOOLHOUSE.



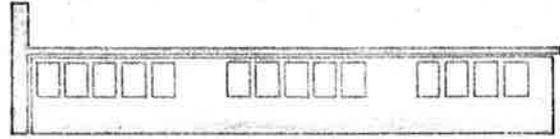
ONE TEACHER TO AS MANY STUDENTS AS WOULD FIT.



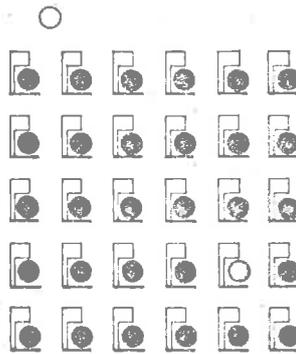
AN EXTREME EXAMPLE OF THE ONE-ROOM SCHOOL THAT PAVED THE WAY FOR MASS EDUCATION.



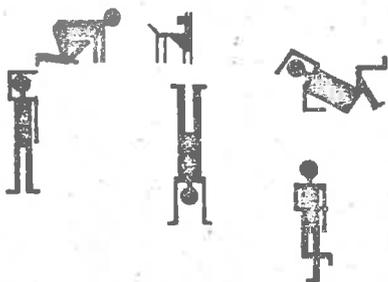
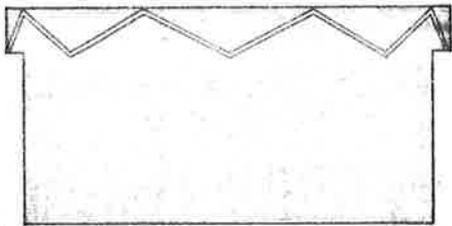
THE CLASSROOM AND THE GRADED SCHOOL.



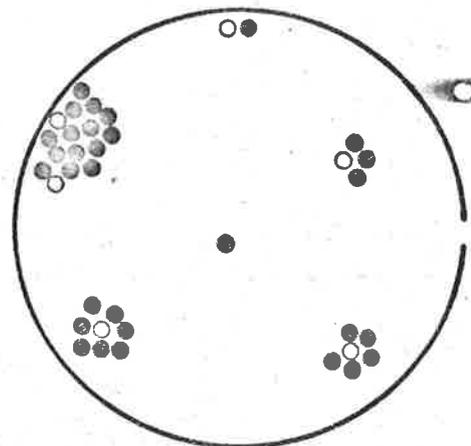
THE INDIVIDUAL CLASSROOM.



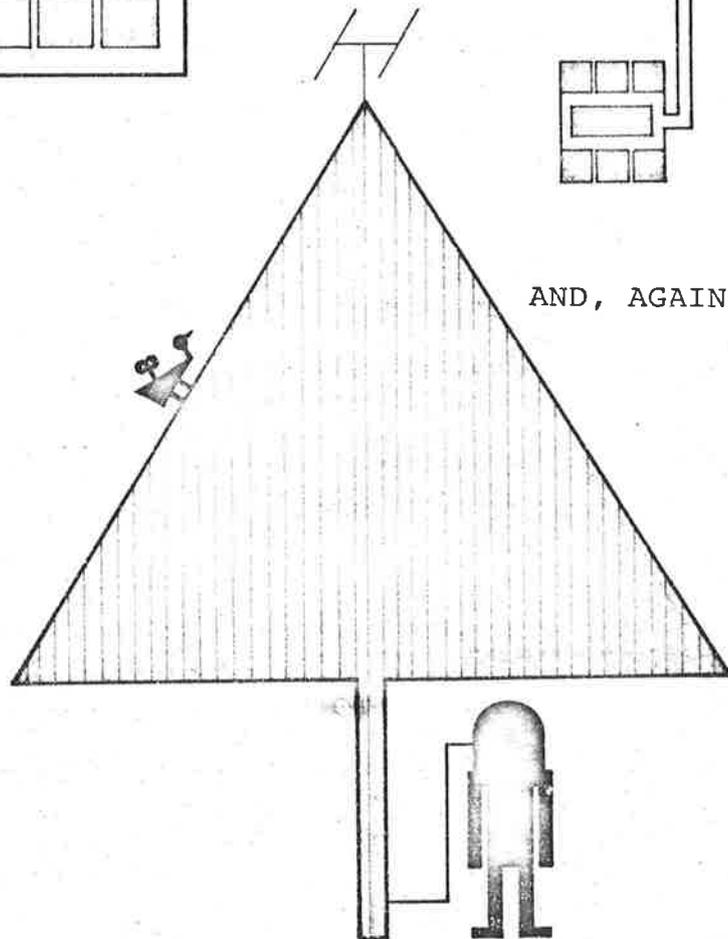
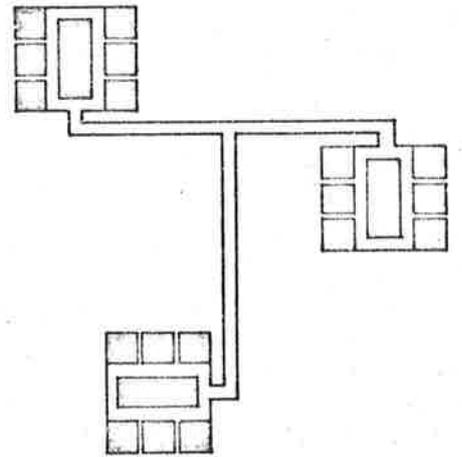
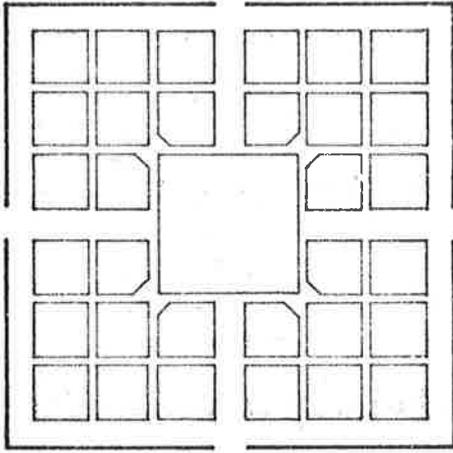
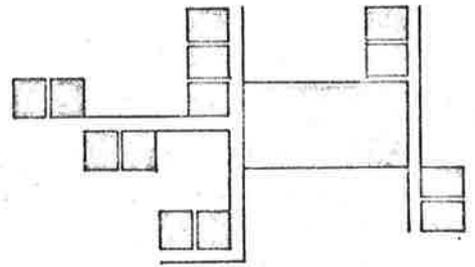
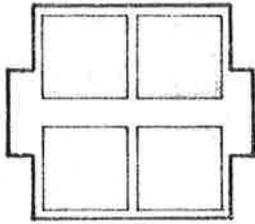
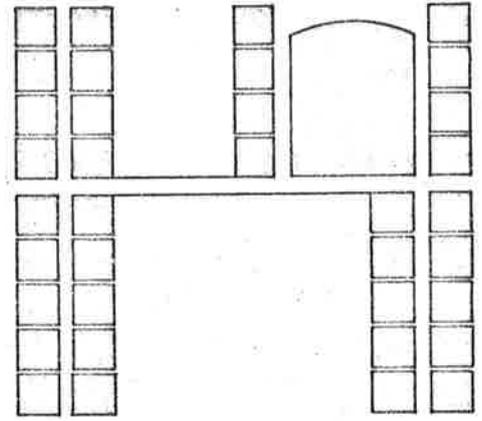
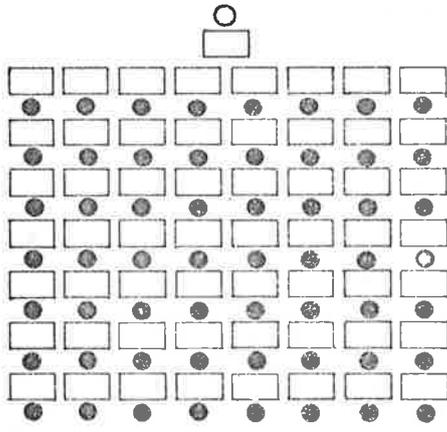
AFTER WORLD WAR II. SERIES OF SINGLE CLASSROOMS, SMALLER CLASSES, AND SPECIALIZED SUBJECTS.



LEARNING SPACE AND UNGRADED CLASSES ... THE STUDENT AS INDIVIDUAL LEARNER.



MOBILE SPACE AND TEMPORARY SPACE AND GREAT PLAN FLEXIBILITY.



AND, AGAIN, ONE "TREE"...

----- the entire wide transistorized, transmitted  
telegraphed, televised world.



3.0 EDUCATIONAL DEVELOPMENTS LEADING TO OPEN PLAN SCHOOLS

3.1 About 1875 the South Australian Educational Act was passed and the local education authorities found they had to cater for a suddenly unplanned-for host of children who were to be compulsorily educated, so a system was developed including the following:

1875

- \* Large groups of children (see p.5 History)
- \* Grading by age
- \* Teachers working as individuals
- \* Assumptions about equal learning capacity
- \* Very limited subject matter
- \* Content in subjects
- \* Strict discipline
- \* Limited and ill-educated teachers
- \* Obedience, conformity
- \* Limited aids
- \* Sitting still
- \* Seen but not heard
- \* Platform, blackboard
- \* Tightly organised timetable

Then, as the decades passed, the harsh regime of the late 19th Century was modified until now, a hundred years later, a system has evolved which includes the following:

1975

- \* Smaller groups (refer diagram)
- \* Some ungrading: individual differences
- \* Teachers working cooperatively
- \* Range of content
- \* More integration of teachers, pupils, environment
- \* More relaxed discipline
- \* Better educated and prepared teachers
- \* Self-reliance, initiative
- \* Whole range of aids
- \* Movement
- \* Child talk strongly encouraged

3.2 The trend of the changes from 1875 to 1975 has been equivalent to a transition from a traditional mode to a child-centred mode and, importantly, this change from one kind of teacher operation to another has been accompanied by a number of residual practices. Into 1975 we have brought some of the practices of the 1870's. For instance, the following have not changed very much:

- \* One teacher per group
- \* One group per room
- \* One room designed on the assumption that children were going to be quiet
- \* Insufficient teaching aids



EDUCATIONAL DEVELOPMENTS 1975

- \* smaller groups
- \* teachers working co-operatively
- \* more integration of teachers, pupils, environment
- \* more relaxed discipline
- \* self-reliance, initiative
- \* whole range of aids
- \* movement

3.3 Although a move has been made to a more child-centred mode, it is increasingly difficult to operate in this mode because of:

- 1) The isolation of teachers.
- 2) A teacher-pupil ratio of 1:35 and insufficient aids <sup>which</sup> (to) make it difficult to cater for individual children (1:35 set by South Australian Education Department as maximum intended number per class).
- 3) Noise prevents free child movement and this inhibits initiative and self-reliance.

or to put it another way, the rooms and furniture are too noisy, teachers are too isolated and groups are too large and the supply of aids too small for the main requirements of the child-centred mode.

3.4 If it is intended to move adequately towards the child-centred mode, then clearly architects and educators will have to do something about the architecture and the question of pupils of teacher-pupil ratios and the question of supply of aids and the question of teacher talents being shared and consultation taking place.

#### 4.0 DEVELOPMENT

4.1 The developments in education which led to the open plan design of schools began in the 1930's with the research and work carried out by Susan Isaacs at the Malting House School in Cambridge. She believed and proved that, if children were allowed to experiment freely with a wide variety of materials and to explore the environment both inside and outside the school, a good learning situation would result.

4.2 Years later the work done by Piaget supported this philosophy. He thought that:

"Learning takes place through a continuous process of interaction between the learner and his environment."

(6)

4.3 Following the lead of Susan Isaacs, teachers became increasingly aware that the environment is of paramount importance for the intellectual growth of young children and that a choice of many activities should be offered. The apparatus designed to teach specific facts was augmented and in some cases replaced by a variety of materials and it was found that the primitive materials evoked the greatest concentration and inventiveness.

4.4 A full list of activities <sup>is</sup> ~~are~~ not an end in themselves <sup>itself</sup> but will provide experience for the formation of concepts in mathematics, opportunities for creative work and for language development. Among the older infants they will also provide starting points which will lead to interests in traditional subjects. It was an enormous task for any teacher to offer all these activities in the classroom each day. Some compromised by providing only a few at certain times of the day, but the more enthusiastic attempted to provide all.

To solve the problem of space they used parts of the school which had previously been empty. Children were encouraged to move from one activity to another using the hall, corridors and cloakroom. Some activities which needed more space were shared between two or three classes and others took place in the open air. Doors were left open for easier circulation and teachers cooperated to a much greater extent than they had done before.

- 4.5 As teachers became more skilful and confident in this approach, they devoted most of the day to individual and group work, only making breaks for Assembly, Physical Education, stories, poetry and music. There was no need to safeguard particular subjects such as mathematics by reserving special times for them, since the children chose them sufficiently and for longer periods than would have been allocated by a timetable.
- 4.6 It was soon noticeable that a school working in this way became a unity instead of a series of boxes. Teachers were amazed at the countless opportunities which arose which could lead to a child's intellectual development and at the way he became utterly absorbed in his own interests. Many natural experiences occurred which contributed to his all-round development and learning became an integrated whole. Teachers moved about the school from group to group, from child to child, discussing, participating and stimulating interest. Ideas were shared and help freely given to all who needed it. Relationships became more friendly and in some schools it was difficult to tell at a glance which children "belonged" to which teacher.
- 4.7 Progressive schools had reached this stage in development when architects from the Public Buildings Department in South Australia and members of the

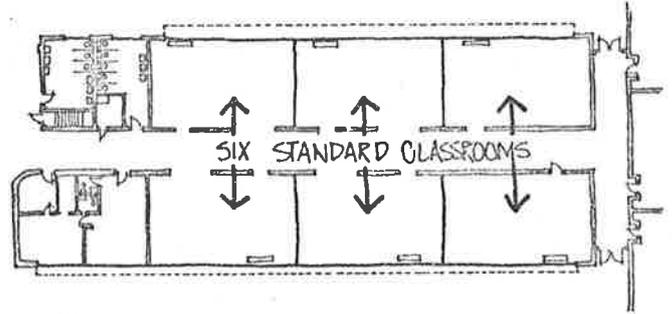
Education Department, also in South Australia visited schools in many parts of the State to observe children at work and to consult with enlightened teachers about the type of schools they needed. The results of their findings can be seen in some of the new schools.

- 4.8 The teaching area has now been conceived as the whole school environment. The demand for more room has been satisfied by making the 'corridors part of the teaching space and other specialised areas have been given a dual purpose. Supervision has been made easier by opening up these places and reducing the number of walls. Mobile trolleys and cupboards, together with a few carefully placed screens, make it easy for teachers to set up working bays where certain activities can be permanently housed and there is direct access to the open air where provision has been made for the children to work out of doors even in wet weather.
- 4.9 To summarise the suggested advantages of an open plan school, firstly, it provides an environment which encourages greater cooperation between teacher and teacher, teacher and pupil and pupil and pupil. It encourages also the development of less rigid patterns of teaching and learning. The teaching talent is more likely to become available to all the children in the school. Young teachers do not work in isolation and they can learn from more experienced colleagues. Similarly, older teachers can benefit from new ideas introduced by younger teachers. The atmosphere of the school becomes more relaxed and more space becomes available for various activities when there are fewer walls to form unnecessary barriers. The problem of noise may often be a cause for concern initially, but as teachers and children become accustomed to the normal classroom level of background

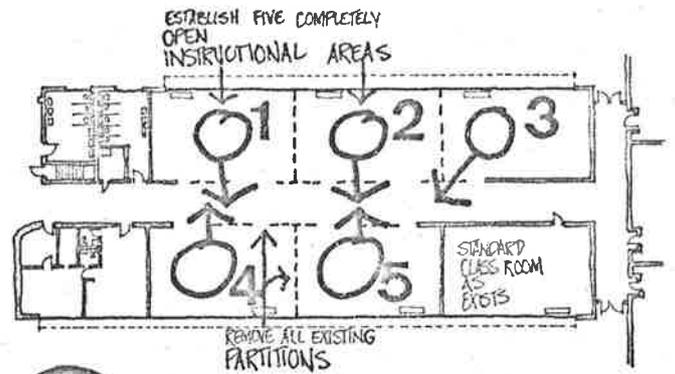
noise and the generalised hum of activities, it is only the unexpected sudden sound which can be disturbing. Teachers working side by side modulate their voices so that they can be heard by children they are talking to but do not reach another group. Children who are interested in what they are doing screen out stray sights and sounds which might otherwise be distracting. Classroom walls do not, in fact, cut down noise completely and many sounds can often be heard in the next room in traditional buildings.

*What about the disadvantages?*

THE TYPICAL 1940's, 1950's AND 1960's SCHOOL / CLOSED 'CRACKER BOX'  
TYPE CLASSROOMS  
PHYSICALLY CONFINING / LIMITING EDUCATIONALLY.

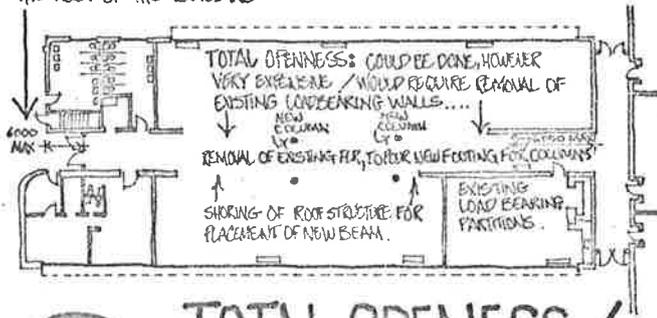


# 1. EXISTING CONFIGURATION



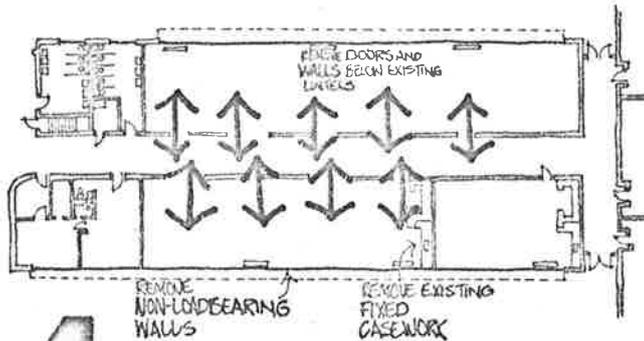
# 2. PROGRAM DESIRES

CODE REQUIRES FIRE DOOR SEPARATION FROM THE REST OF THE BUILDING



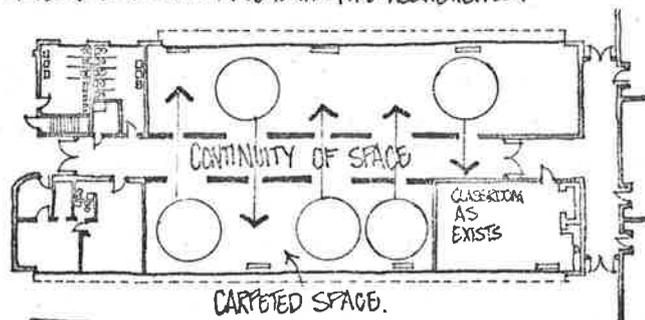
### 3. TOTAL OPENNESS / POSSIBILITY

A MUCH MORE EASILY ACCOMPLISHED "OPENNESS" IS AVAILABLE WITH A HIGH DEGREE OF FLEXIBILITY.....



### 4. PARTIAL OPENNESS

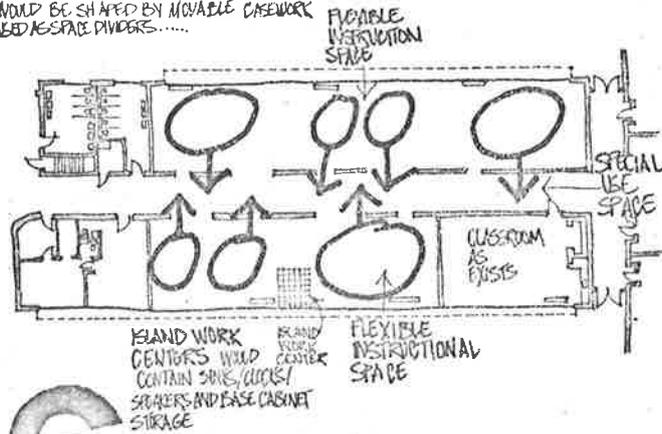
A SOFT LAYER OF CARPETING THROUGHOUT THE REMODELED AREA WILL ADD VISUALLY TO THE EXPERIENCE OF SPATIAL OPENNESS AS WELL AS ADDING TO THE SPACE FUNCTIONALLY AND AESTHETICALLY



### 5. CARPETING

SPECIAL USE AREA OR CENTRAL SPACE COULD BE USED AS A SMALL GROUP OR INDIVIDUAL STUDY SPACE OR AS A DECENTRALIZED PORTION OF THE SCHOOL MEDIA CENTER

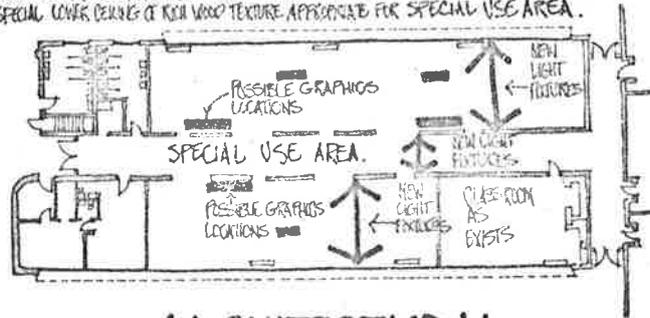
FLEXIBLE INSTRUCTIONAL SPACE WOULD BE SHARED BY MOVABLE CASEWORK LEAD AS SPACE DIVIDERS.....



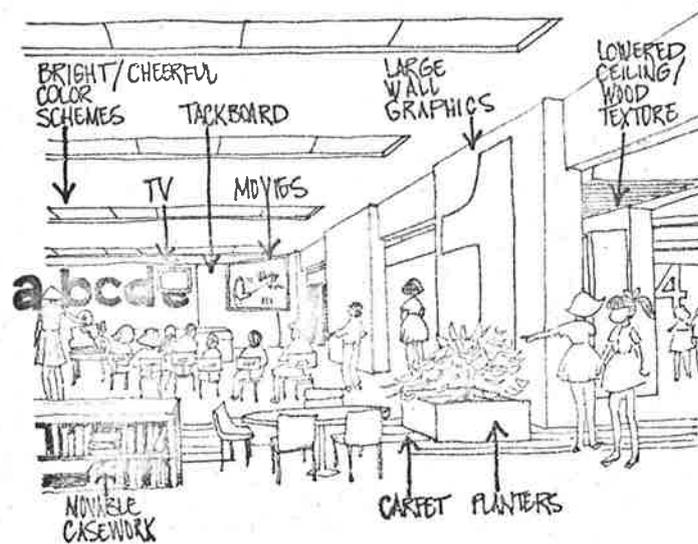
## 6. SPACE USE

ARCHITECTURAL TREATMENTS / CEILING AND LIGHTING PATTERNS, WALL GRAPHICS, FURNITURE, COLOR, ETC. HELP MAKE A VITAL TEACHING-ENVIRONMENT

SPECIAL. LONG DENING OF RED WOOD TEXTURE APPROPRIATE FOR SPECIAL USE AREA.



## 7. ARCHITECTURAL TREATMENTS



## 8. ACADEMIC ENVIRONMENT

5.0 CHANGE (1975)

- early 50s to late 60s*
- 5.1 The school population explosion of the late ~~1960's~~ and early 1970's, the growth of knowledge in every field, the heightened skill requirements of the labour market in the face of automation, the continuing shortage of qualified teachers and administrators - the challenges always seem to stay one jump ahead of even the most farsighted school system.
- 5.2 This has led to the question "Is there a more efficient and effective way to achieve today's educational objective?"
- 5.3 Because of this, study courses are being overhauled and modernisation of subjects is well under way.
- 5.4 The teacher is becoming more of a guide and less of a "teller" and this is because new teaching approaches as well as new problems demand that schools innovate. In such a school small groups will be engaged in diverse activities perhaps linked to a common theme and through this theme, the teacher will encourage the child to exploit its own potential.
- 5.5 Children will read because they need to discover facts, discover mathematical principles because they need the answers, write creatively because of their experience and involvement. The groups will move to 'resource' areas (information library) to gather information - in book, tape, film or slide, to 'practical' areas with benches and water available, to areas containing practical mathematical equipment and other such like spaces.

5.6 The twentyfour foot square separated classroom makes this mobility a near impossible task, yet many South Australian schools recently visited are striving to make it possible by removing dividing walls between rooms and corridors.

5.7 In every area of educational practice today in South Australia a striking variety of options has opened up. The new kind of school does not encourage mistakes, but aims for organisational patterns that will work, and will work well. The new climate permits mistakes and facilitates their correction. Underlying this process of diversification and enrichment, a remarkable kind of fission seems to be operating on the concepts of education. Time was when concepts like "teacher", "class", "curriculum", "class period", "text book", "classroom" and "school" each had an accepted definition. Everybody knew - or thought they knew - what a teacher did, what the "ideal" class size was, what a curriculum consisted of and what a schoolhouse was like - these definitions saved a lot of trouble - some thinking, because in combination they served to answer a great many questions about how to "do" education.

5.8 Until recently there was no economically practical way to make instruction truly individual. All that education could do to provide for individual differences was to adjust the basic school programme as best it could to the needs of each student.

Today, innovating educators 'start' with the student and with many programmes. On the premises that no single programme is applicable to everyone, they attempt to meet each student where he is and adopt a combination of programmes to his needs. Around this central idea the various new procedures fall readily and fruitfully into place.

*Where is this occurring  
SA*

Various sized groups, continually accessible to the student, can meet his changing needs and powers. A team of teachers - or one teacher, or another child - can provide the particular kinds of stimulation and guidance he needs at any given point in time. A flexible schedule based on small modules of time can make sure that no arbitrary bell will interrupt thought or action. A wide variety of resources will permit him to pursue both his formal subjects and his own interests in the way best suited to his needs.

- 5.9 The wealth of new options in designing a school must be considered with this focus: how, in a particular situation and with the available resources, can each individual student be given a set of experiences which will best facilitate his own education. The shape and atmosphere of school buildings is changing drastically with such approaches as above. The new words which educators use to express their needs for space are words like "open", "simple", "flexible", "ample" and even, it is reported "beautiful" and "exciting". Of all of these perhaps flexible is the most used and the most abused, but also the most promising.
- For, of all the shortcomings of traditional school design, the one which most acutely galls the experimental, innovative educator is the constraining effect on the education programme itself.

"A schoolhouse is a big box filled with equal sized little boxes called classrooms". (7)

wrote one educator in a passage which has become the touch-stone of reform in school design.

"The very architecture sorts the children. It helps the administration to establish groups of uniform size - 25 pupils if the community is rich, 35 if it is poor and 50 if it doesn't care. In each box is placed a teacher who will be all things to all children all day all year. If it be a secondary school, bells will ring to signal the musical chair game that is played a half a dozen times a day as groups exchange boxes". (8)

- 5.10 The counter against such rigidity has been "flexibility". The term has become too much a catchword and architects complain that too often it allows educators to shift educational problems to them without indicating solutions. "Flexibility" in more specific terms to the architect should convey: expandable space that can allow for ordered growth - convertible space that can be economically adapted to programme changes - versatile space that serves many functions (e.g. play acting, writing, painting) and malleable space that can be changed at once and at will.
- 5.11 With education in an unprecedented phase of questioning, changing and experimenting, flexibility should not be exercised from educational discourse until more than the present minority of schools reflect the basic truth it expresses.
- 5.12 New teaching and learning procedures to be put into actual effect must not only be conceived, understood and adopted at the policy level - it must be designed to work in a specific situation. This is where many a school headmaster has found difficulty because "the building wouldn't get out of the way". They are handicapped by facilities that block groups of students and teachers off from one another, make mobility onerous and impose a custodial attitude towards resources and prohibit full use of technology.

The greatest single factor limiting the effectiveness of team teaching approach at present is the lack of adequate facilities. The school programme should dictate space and not the other way around (e.g. previous paragraph).

"Building design makes a major contribution to a school programme aimed at quality education by providing greater flexibility".

to quote the final report of the National Association of Secondary School Principals' Trump Commission (America). Similar statements have been issued by teachers' committees observing reactions in South Australia.

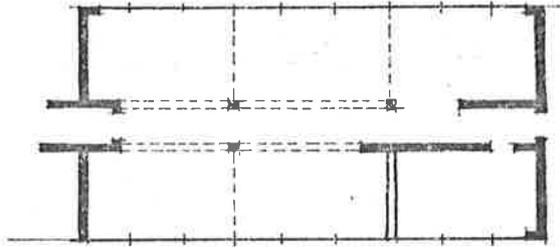
5.13 In cases like televised instruction or the new emphasis on independent study, the implications for design are strong and clear, but in other curricula that will foster creativity, they are less so. The school building today will perforce serve new functions well into the next Century as educational goals will have presumably changed and even new goals during its lifetime; it should be designed to serve them as well as possible.

"Traditional<sup>al</sup> school designs should not stifle new ideas. Identical boxes should not enforce the same programme on all students and teachers - each is a unique individual. Fixed furnishings must not quash spontaneous inquiry - dismal, spiritless and uniform decors not blight a student's creativity.

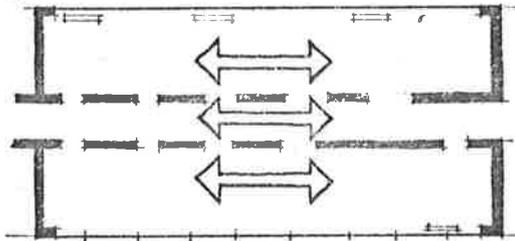
5.14 School building design should rise beyond conforming to a fixed pattern of school organisation and learning. Educators and architects can create an ever changing, constantly improvable environment for the learning process - "a self-renewing school"  
i.e. the need is for a different kind of school in which teaching can proceed flexibly in areas quickly adaptable for different kinds of learning situations.

THE CHANGING

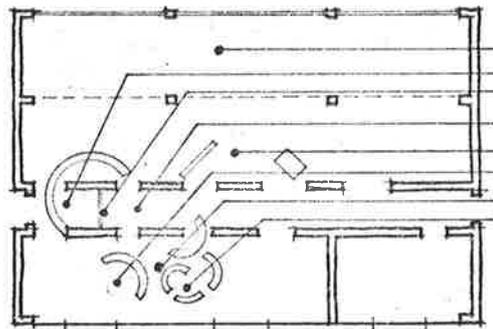
# NEED FOR SPACE



LOAD BEARING WALLS AND BEAMS REPLACED.



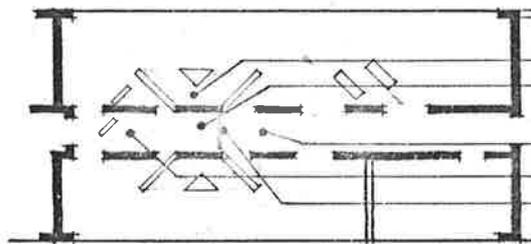
PARTITION WALLS REMOVED.



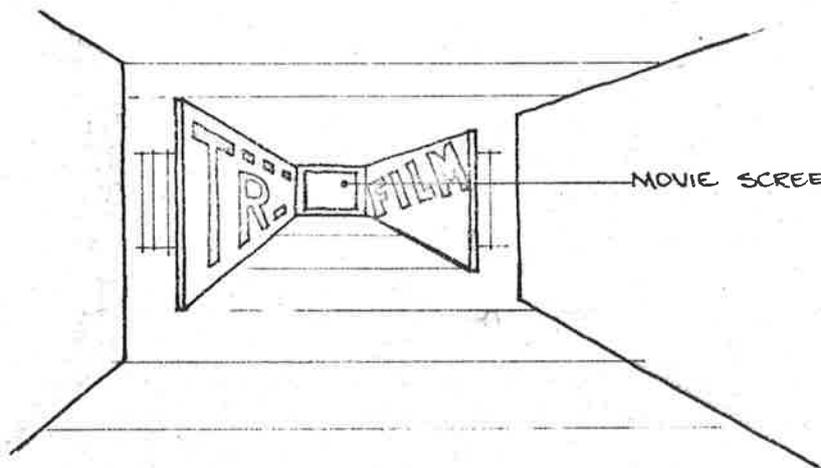
- ADDITION.
- INSTRUCTIONAL MEDIA STORAGE.
- FILM SCREEN.
- AUDIO VISUAL SPACE.
- STUDENT CONFERENCE.
- SMALL GROUP INSTRUCTION.
- INDIVIDUAL READING SPACE.
- LIBRARY RESOURCE SPACE.

*I see no rationale for the placement of space allocated for these activities - they look random*

*minute - does this reflect the paucity of facilities?*



- INDIVIDUAL STUDY SPACES.
- INSTRUCTIONAL MEDIA SPACE AND STORAGE.
- FILMS.
- LIBRARY RESOURCE CENTRE
- FILM SCREEN.



MOVIE SCREEN.

## 6.0 INDEPENDENT STUDY

### 6.1 A New Working Method

Independent study allows the student to develop his own ability to seek out information, organise facts, master material and generally accept responsibility for his own learning. This independent study (or investigation) is the mental equivalent of physical exercise. No-one can do it for the student. He must do it himself. 'The pupil is working on an individual basis.

### 6.2 Where might such study take place?

As an ideal, one would seek intimate spaces, anywhere that the school allows one to find a place of his own, where problem solving can be done with a minimum of distraction, individual tasks can be pursued and learning machines or books could be used.

6.3 Children derive satisfaction from self correcting devices from which they can learn at their own place without the direction of an adult. As these personal investigations move the student ahead, he begins to use his newly acquired skills for independent pursuits and through the use of programmed materials (by teachers) he can proceed at his own pace in mastering some materials and even test his own progress to gauge how much remedial or other extra work needs to be done. This is where multi-sensory equipment can be used to advantage; such as single-concept films on cartridges, micro-filmed materials, audio and video tapes, maps and globes, books and other printed materials, slide projectors and individual filmstrip viewers.

6.4 The new working methods discussed above require new learning materials and create new demands on the facilities.

By the time a student reaches his secondary school years he needs more specialised materials and equipment for independent study. Laboratory tables for mathematical and science experimentation, simple computers, art materials and facilities - schools can deploy them for student use without continual supervision by an adult. The centre of independent study for nearly all students by now could be the comprehensive library-learning centre, generally known as the RESOURCE CENTRE - it could also serve as the hub of each student's school programme, thus making the high school student more responsible for his own learning.

Guidance is essential, of course, but with self-reliance the norm.

- 6.5 Under a team-teaching organisation, independent study might well occupy a (full) quarter of the student's time in high school and, because of this, the underlying purpose is to get the student engaged in his own education, setting his own goals, devising his own procedures, learning from his own mistakes. Thus, it should become clear to the student that responsibility for success is his. He knows when he succeeds or fails, not because an adult judges his work, but because a "responsive environment" tells him. This is an ideal of such independent study arrangements. But, it is an ideal worth aiming for as we think about the existing environments provided in our schools.

## 7.0 TEACHING

### 7.1 Instructional Patterns

Today the question is being asked, what can be done to improve learning, given the school's total teaching staff, its learning resources, the talents of the students and the time and space available for the school programme.

7.2 Only when considered in such terms, do logistical problems yield to the most efficient and effective solution. Thus, the following kinds of questions should be asked:

- \* As the individual moves through a set education programme, what different kinds of opportunities should he have for learning things in different ways?
- \* When and how often should he work by himself, with a peer or two, with a dozen students and a teacher, in large groups?
- \* What resources and technology - such as books, tapes, films and programmed texts - should be available?
- \* What should be his contacts with school staff - with home base (i.e. area and a class teacher to relate to) - teachers, demonstrators, group discussion leaders, librarians, television teachers, community experts?

The above different aspects must be considered as an integral system to obtain the unique advantages of each element provided for the learning process.

7.3 The analysis of activities must be the basis of models for the new school.

- 7.4 A comparison of various teaching techniques shall be discussed in this section and since most existing schools are still in rows of standard classrooms along long corridors, it is convenient to start with the conventional class grouping, since that is where most schools and most children will start.

#### The Conventional Class

"School" to nearly everyone still conjures up a mental picture of a room (24ft. x 24ft.) that encloses a teacher facing 30-45 pupils.

This is the prevailing pattern in most schools with a fixed number of students and the solitary teacher who dominates with the minimum of either support or interference from outside; the compelling reasons behind this pattern appear to have more to do with accounting and administrative procedures than with learning, as was indicated by interviews with staff. The self contained classrooms tend to limit the teacher's time for dealing with individual students.

Where the conventional class system does have its uses, educationally, as in the nursery and kindergarten classes, in which case a single manageable group seems natural for story-telling, group games, reading exercises and films. At school this is catered for by withdrawal rooms, also the group as such serves valuable psychological purposes for the young child just entering school, helping him to get used to a greater variety of people than he knew at home and keeping his environment stable as he moves into the new world of school and teachers.

As the child proceeds through school, this conventional-sized class serves an important function for teacher-directed expository teaching. The teacher introduces stimulus material, gives directions, questions individual students, administers tests, generally uses films or television, presents visiting experts or has pupils read papers or report the results of individual or small group projects.

The group of children generally focus on the teacher (or infrequently, on one student) with the flow of ideas going one way from the rostrum or occasionally back and forth between the teacher and a given student, but a group comprising 30-45 pupils is too many for lively general discussion. An intimate environment is often required to make most of student-teacher give and take.

There seem to be few convincing arguments for the conventional classroom with its fixed 1:30-45 ratio as part of a beneficial educational programme.

In the lower grades the arrangement isolates the teacher with the same children day after day and presumes her/his competence in the full range of subjects taught, except for a few of the non-academic specialities (e.g. music). When the upper grades are reached, subjects are confined to more prescribed syllabuses, more than at junior levels, the self contained class similarly presumes the teacher's competence in the full range of his assigned subject and fails to take advantage of the variety of teaching talent and background a school may have within a field such as English or History (thus, need for team-teaching). Classes are taken by different teachers for different subjects - different from primary levels where one teacher is responsible for instruction in a whole range of subjects. Such patterns of instruction at senior levels lend themselves more readily to team-teaching. Design wise several drawbacks to the "egg crate" school is its characteristic lack of visual variety; identical structural elements - ceiling height, lighting, windows - are duplicated room after room.

In the "corridor" school it is difficult to achieve the objectives of the new curriculum. School designs should be realised such that they can be:

"An organisation of unlike parts, a coordination of differences which should be safeguarded, encouraged, within the overall framework".

7.5 As children get older and more independent there is less use for the class-size group, whether the students are pursuing laboratory experiments or art or regular academic studies. While the self contained classroom might well be used for about half the child's time in the primary grades, in the high school the standard class might be better used for a considerably lesser proportion of the school day.

*This may be a good point, but the primary need closer connection in order to validate it.*

7.6 Where team-teaching is to be used greater freedom is possible, teachers will probably find that they wanted to constitute groups this size for only a fifth of the time in primary grades and progressively smaller fractions through the intermediate years and high schools.

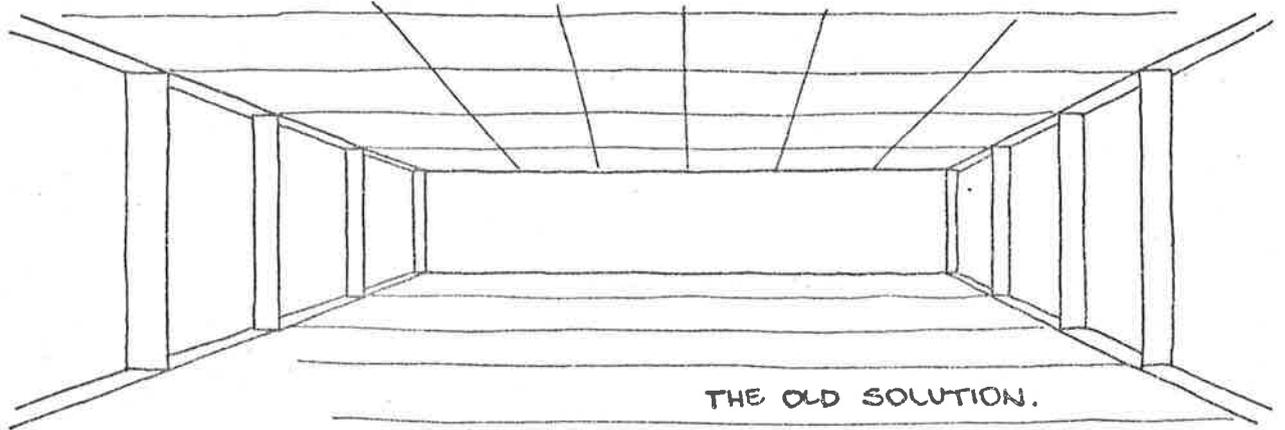
7.7 As more teaching staff become available at all levels (as is happening now) student independence could be fostered earlier with a resultant lessing of the need for this standard-sized class during the rest of the school career.



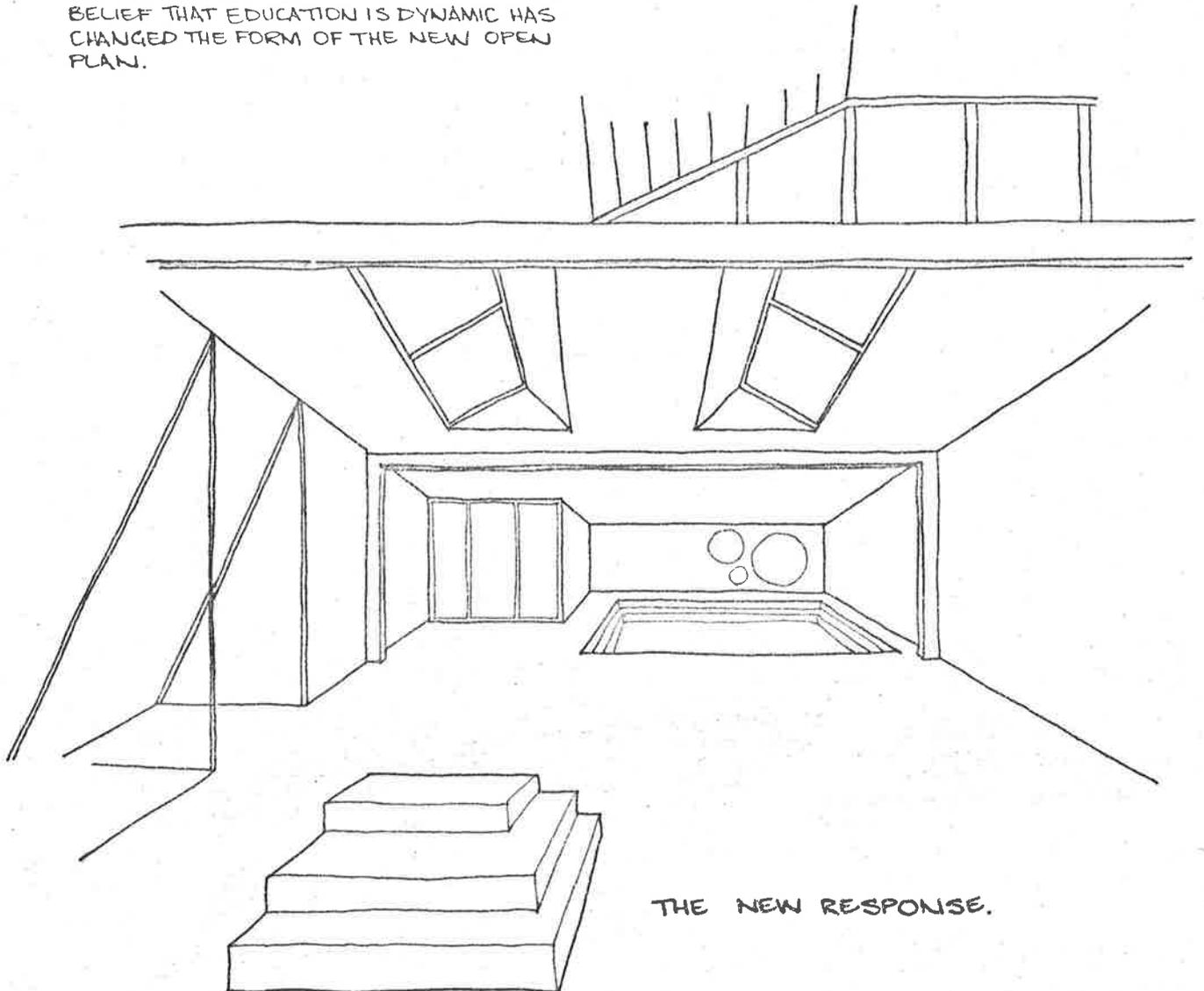
INDEPENDENT STUDY

As children get older and more independent there is less use for the class size group, whether the students are pursuing laboratory experiments or art or regular academic studies.

# THE HUMAN ENVIRONMENT



THE ARCHITECT'S RESPONSE TO OPEN PLAN SPACE IS BECOMING INCREASINGLY SOPHISTICATED. COMMITMENT TO THE BELIEF THAT EDUCATION IS DYNAMIC HAS CHANGED THE FORM OF THE NEW OPEN PLAN.





THE ARCHITECT'S RESPONSE - the new open plan

As children get older and more independent there is less use for the class-size group.

8.0 PRESENT ACTIVITY PATTERNS

8.1 Visits to schools in the metropolitan and country areas of South Australia have shown that, with the new trends in education, children's activities can no longer be confined within a "conventional" 24ft. x 24ft. room which is also without the availability of immediate water supply and drainage.

8.2 In one infant school (typical of many) the following simultaneous activities were observed in the corridor - painting (at easels), a 'shop' where children were just playing or measuring, 'dressing up' with the impromptu drama associated with it. Inside the adjoining classroom, many various, but less vigorous activities were taking place. In addition to those activities, other schools in similar circumstances, were using large constructional toys - building up to 8ft. long; children were collecting, sorting, mounting, engaged in woodwork. Other children were constructing towers amid the constant hazard of comings and goings of others. Often these 'activity periods' are of relatively short duration and at present sometimes appeared to lack direction and integration with the full range of work, largely it was felt, because of the physical difficulty of accommodating this freedom of action into the existing building structure. Within the classrooms an area of floor had often been cleared for practical work.

9.0 OPEN PLAN - WHY?

9.1 At this stage an evaluation of the advantages and limitations of open space is necessary before bringing together some current educational ideas on environments for learning and indicating how the kinds of activities now widely considered to be desirable in a sound school programme might be expected to take place.

Often one thinks in bi-polar terms: that is in terms which are the opposite of each other.

Many a pointless and bitter argument has revolved around the irreconcilable bi-polarity of one's thinking. Education is not exempt - the following patterns represent extremes of school organisation and instruction.

- \* Small group - straight rows
- \* Learning by interest - drill and repetition
- \* Free movement - classroom rules
- \* Private research - teacher directed classroom
- \* Open space - 24ft. x 24ft. egg crate

The division of opinion between the supporters and opponents of open space would seem to be based less on a thorough evaluation of the advantages and limitations of open space than on an expression of personality. This is unfortunate because it tends to obscure the real issues surrounding the open space question. Very rarely was it found (through personal interviews and discussions) that a teacher would occupy one or other of the extreme positions. Most teachers tend to move back and forth between extremes according to circumstances. That is, as well as extreme positions there are also possibilities for intermediate positions.

9.2 From general observations and questioning an attempt may be made to define the two extremes, i.e. traditional position and the teacher at the other end of the continuum.

9.3 Traditional

1) Knowledge

In general, an empiricist view, that all knowledge is the result of experience. This experience needs to be structured. A clean slate view is favoured, the child is a jug to be topped up. The traditionalist is suspicious of 'readiness', of Piagetian stages. The Piagetian approach does not deny the relationship between knowledge and experience, only the way it is gained.

*What sources  
→ references  
in these models  
based on?  
They ought to  
be acknowledged.*

2) Society

The view is elitist - some men are born to be leaders, some are to be led. The traditionalist, therefore, favours exams, gradings, standards, streaming, classes in society etc. as exemplifications of elitist.

3) Individual

There is a belief in 'original sin' - that the individual is born bad, in a state of imperfection. Careful training is necessary, psychology is nonsense. School reports will tend to emphasise 'is lazy', 'does not concentrate', 'needs to work harder'.

9.4 The teacher at the other end of the continuum also holds fundamental ideas about knowledge, society and the individual.

1) Knowledge

- |                          |                    |
|--------------------------|--------------------|
| Pre-knowledge            | - discovery method |
| Trailing clouds of glory | - follow interest  |
|                          | - readiness        |
|                          | - maturity         |

2) Society

Democracy

- rights including rights of children
- classes in society are bad
- restricted franchise is bad
- no school assemblies
- group learning
- no streaming
- no marks or grades

3) Individual

Rousseau

Innate and natural goodness

- spontaneity
- creativeness
- natural way of doing things
- punishment is evil

Having defined the two extreme positions, the question may be asked, which of these positions is the correct one? - it seems to me neither is, for in the final analysis it is whether each carries out his/her own approaches to best of their ability - how one adapts the facilities available as a teaching aid.

*what is?  
Are you saying that  
it all boils down to  
which approach works  
best? What about the  
fundamentally different aims?*

9.5

Therefore, although present day education has moved to a more child-centred mode, the traditional school building design is making it increasingly difficult to operate in this mode and if it is intended to move towards the child-centred mode (as it is in South Australia), then the building design (i.e. the architecture), the teacher pupil ratio, the supply and design of aids and the question of teacher talents being shared and consultation taking place must all be studied and used to ensure that the pupil's experience of reality is as many faceted as possible.

10.0 PRESENT EDUCATIONAL OBJECTIVES

*This section is about the learning methods and modes, not about objectives*

10.1 Dialogue (Instruction through discussion) ??

An intimate environment is often required to make the most of student-teacher relationship. Though conferences can be conducted by pulling a chair up to a teacher's desk or by using two chairs in a student's own work space, a well designed school should provide small spaces where a teacher and student may talk together in privacy. Such spaces could be: small conference rooms - a lounge area (in high schools) - casual reading corner - offices - an area in the library and/or laboratory.

Dialogue should be where the teacher comes face to face with the student as an individual and if the teacher exploits this to the full he can help to focus the rest of the student's school experiences.

Unplanned and casual dialogues can be the most educationally effective.

In general, dialogue precedes and also follows independent study, thus, in a school keyed to the encouragement of independent study and individual progress, a typical relationship of teacher and student might follow these courses:

- 1) As a student starts a new project, the teacher discusses with him the possible directions it could take, perhaps helps him to choose one and gives him some notion of likely resources.
- 2) During the project the teacher may check on how well the student operates on his own; question him and then guide him if necessary, or merely look and listen; or the student may want to check his own progress or discuss his problems.
- 3) At the conclusion of the project the teacher appraises it with the student and together they work out next steps or new projects.

The above can be more readily achieved in the broad scope of studies where we do not have the media and environmental restraints of the traditional school design.

10.2 Group Discussion

Although the 'small' group (e.g. approximately twelve persons) is the most favoured group size in formal education (i.e. seminars), it is one of the most difficult to achieve in schools of conventional design; whereas in a flexible/open plan space, conversations between individual students and teachers can always be carried out in an unoccupied area, classes can combine into large groups for common lessons (e.g. team-teaching technique). All this can be done without major administration or supervision problems. This is due to the architecture of the unit as well as the ideas behind the new educational innovations.

With the new open space school design and flexible arrangement of furniture there need not be a "back of the class" and dominating "know-it-alls" can learn by having to fit their contribution into the group within which they are working. A group of students working together without a teacher offers certain pedagogical advantages otherwise unobtainable.

Students, when deprived of a teacher for the final word, work out their divergent reactions to problems within the group, thus perceiving some of the basic assumptions of scientific method, personal variations in seeing facts, in making inferences and in arriving at conclusions and making judgments.

The small group is primarily useful for interaction - controversy, debate, side-talking, opinion forming - it also lends itself to one-way communication, either from a teacher or one of the students.

In many ways the close pupil/teacher relationship which evolves within the "flexible unit" teaching situation can be the backbone of learning in the later primary school years and high school.

*may evolve  
But what about  
160 kids on a  
floor with  
5 or 6 teachers*

*they don't necessarily develop a close relationship with  
... ..*

The small group mode takes many forms - the discussion - participations group, the laboratory team, the library project group and small group projects in most subject areas.

The small group or seminar is a highly significant part of tertiary education and beyond. It must be made clear that sometimes groups are appropriate and sometimes they are not. They are not applicable in all classroom situations. They depend upon circumstances, upon the sort of lesson, the sort of children and so on. The intelligent teacher moves from whole class to small groups, to individual children according to the needs at the time. He does not think that any one learning arrangement is necessarily better than another.

It must also be clear that when talking about "groups" it is a very broad term. People often confuse the seating of children with the manner in which the children work together (i.e. ensuing out of working well).

Reading groups is one sort of group situation - discussion groups another - problem-solving yet another. The group situation which has perhaps most value in the school is problem-solving and decision-making.

Groups at work exist along a continuum, the extremes of which are the task-oriented group on the one hand and the growth-oriented individual progression group on the other. A task group has been set a particular job to do - its pre-occupation is a PRODUCT.

*omission?* → A group at work can vary between these two extremes. In each case there are goals of a more or less specific kind. The task group is concerned with achievement and people within it have task roles - such as giving information, questioning, summarising, seeking consensus etc.

The growth group has a goal of group maintenance, and people within it have group maintenance roles such as releasing tension, expressing approval etc.

As a matter of fact, all task groups include group maintenance and growth groups also have specific tasks.

### 10.3 Presentation

There are two main advantages for educational use of thirty and upward.

One is that any presentation that a teacher can effectively make to a large group, one can make sure more economically - and through use of expensive technology, not justifiable for conventional classroom use, more effectively - to a far larger number of students.

The second advantage, and this is a notable one, the use of large groups wherever appropriate, allows more time for independent and small group study.

The chief virtue of large group instruction is that it permits other modes of learning to develop.

Large group presentation is usually pure one-way communication - it is an efficient method of teaching many students at one time and aims to stimulate the student in the direction for further work on his own, or in discussion or small work groups.

A large group needs a large space, indoors or out, but it does not have to be a one purpose space.

Thus, it seems desirable that new schools be designed such that large spaces which are provided are suitable for a variety of large-group activities and are also easily divisible into a collection of useful smaller areas.

Many of the major resources of educational technology come into full play only when applied to the large group. The teacher when lecturing to a group can draw upon a variety of additional resources, e.g. closed circuit television, the overhead projector, slides, microphone, television can be used to bring an experiment close to the audience. The use of televised courses is becoming more important and with the advent of cheap videotapes which might be exchanged, the possibility arises of bringing the world's people and events into the school.

11.0 DESIGN DEVELOPMENTS - EDUCATION/DESIGN

11.1 There are basically two ways in which a school can be designed.

Firstly, the designer can have a pre-conception about form, style or standardisation and fit the educational problem into it the best he may. This method still continues in many cases in this State.

Secondly, he can approach the design with a clear understanding of educational objectives and express them consistently and clearly in terms of space, light, colour, texture, sound and furniture so that the result is a distinct expression of the starting point.

11.2 The expression and realisation of changing educational needs is doomed unless the architect rids himself of pre-conceptions of what a school looks like. The design requirements of a new school emerge from a discussion between educator and architect based upon shared experience of selected educational situations. Teamwork - planning ideas hinge on getting more people into the act as early as possible and consulting with teachers and principals, but such practising educators will not be effective if they are afraid to tell the superintendent 'he is all wet' and, if they only think of the mechanics of a school, chatting about how high shelves should be and whether or not the washroom doors should open in or outward.

11.3 Young people are increasingly unwilling to accept a curriculum unless they understand its relevance to them. Today, schools contain the whole stratum of society so that teachers can no longer rely on blind acceptance by a minority of a scholastic education.

*These belong in an earlier section on the educational objectives and objectives*

11.4 The secondary school in its organisation has to perform two, often conflicting, roles that are relatively new; the encouragement of social cohesiveness and development of the individual personality.

11.5 There is a hierarchy of devices that contribute to flexibility.

1) Specialised Equipment

It is important to avoid, if possible, designing a space with specialised equipment that is laid out in an irrevocable way. Sooner or later the equipment will determine the work rather than the reverse. Science laboratories with fixed benches are examples, which were designed with the emphasis on demonstration rather than with the emphasis on pupils experimenting and finding out for themselves. Flexibility demands mobility and judiciously planned fixed points. Therefore, a compromise between fixedness and flexibility.

2) Partitions

- a) Partitions that perform visually and acoustically as fixed should ideally be capable of being moved and re-erected elsewhere without making a mess. This is longer term flexibility than would be operated by teachers; however, the acoustic requirements of some enclosed spaces may demand a type of partition which cannot easily be re-erected.
- b) All partitions except in wet areas should be such that they may allow fixing of two and three dimensional storage and display devices and materials. Surfaces need to be strong and soft.
- c) Some partitions need to be operable by teachers or pupils and these should be used where the opening up of adjacent spaces is essential. There is a variety of ways of providing psychological barriers.

↳ physical, sensory?

d) Furniture devices can provide excellent space dividers in interconnected areas and can be designed to incorporate work places, storage and display facilities.

3) Furniture

The variety of group sizes, the variety of work and the pervasive use of space demand the constant re-arrangement of furniture and different combination of items.

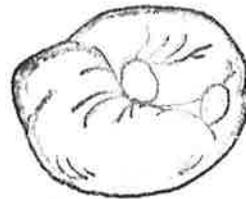
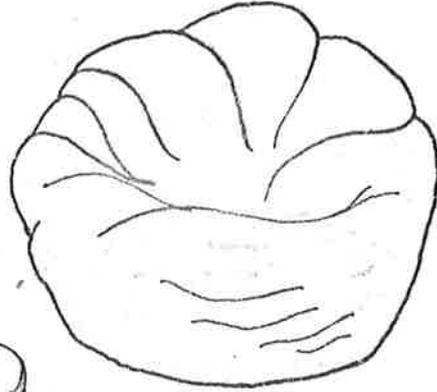
The furniture is the most important means in the teacher's possession for achieving flexibility. To achieve this flexibility, a different attitude to furniture design is required. Furniture design is no longer designing a set piece for a room any more.

The architect must now design a range of related items which can be selected in any combination and be deployed in a multitude of different ways, and yet avoid visual chaos, or be inhibited by unrelated dimensions. To achieve this, every single item in the range must share three attributes:

- i) Related dimensional system
  - ii) Related colour specification
  - iii) Related materials specification
- } to enable immediate flexibility as a teaching aid - easy conversion to create required aid

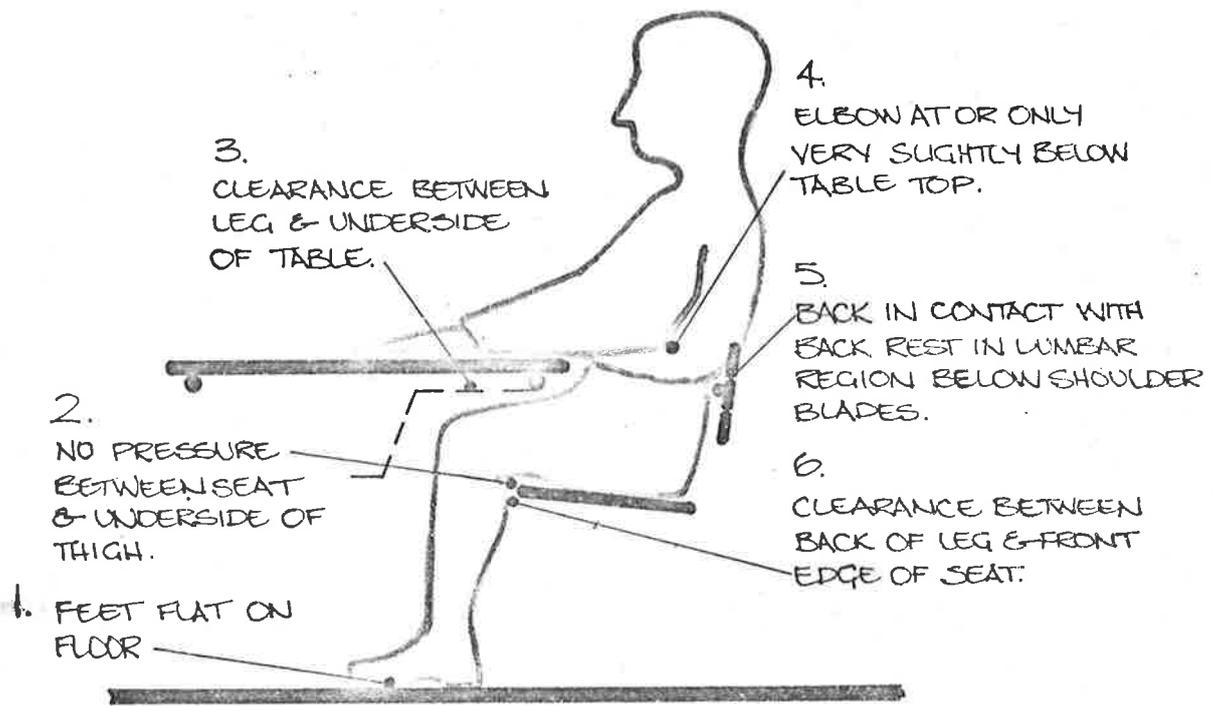
To avoid major conflict between great variety, standardised components that can be assembled with different composite articles must be (and have been) designed and used. Thus, in the range of table components, taps, leg frames, cupboards, trays, runners, hooks, bookracks and shelves have been designed so that in combination these components can provide all the work tables, practical desks, desks with or without storage that are likely to be needed; thus, provision

# FURNITURE



## SIX PRINCIPLES FOR SELECTING FURNITURE.

1. DURABLE - LOOK FOR EASILY CLEANED SURFACES, SOLID CONSTRUCTION, EASY REPAIR.
2. SIMPLE - WATCH OUT FOR THE STUFF WITH A THOUSAND USES AND A THOUSAND PIECES AND EXTRANEIOUS GADGETS THAT FALL OFF.
3. USEFUL - HOW MANY USES DOES IT HAVE? CAN ANOTHER PIECE DO 2 OR 3 THINGS AT ONCE.
4. USABLE - WHO CAN USE IT? IS IT TOO SMALL OR TOO LARGE? TOO COMPLICATED FOR CHILDREN.
5. MOVABLE - CAN IT BE MOVED ON YOUR SURFACE? SKIDDABLE? ON WHEELS? TOO HEAVY?
6. COMPACT - DOES THE PIECE WANDER; HAVE EXTRANEIOUS ARMS; EAT UP ROOM.



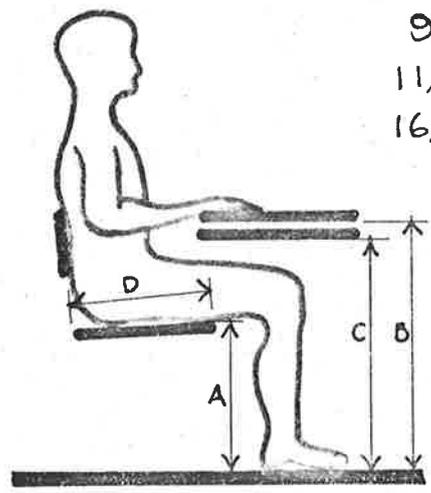
DESIGN DIMENSIONAL CRITERIA FOR TABLE AND CHAIR DESIGN. B.S.S. 3030.

THE CHAIR DESIGN MUST ALSO BE SUCH THAT THE CHILDREN CAN COMFORTABLY ADOPT POSITIONS OTHER THAN THAT SHOWN.

THE CHAIRS TO CONFORM TO ALL THE PROVISIONS OF BS 3030.

CHAIRS TO BE 'STACKING'.

AGE OF CHILD (SIZE NO)	CHAIR		TABLE	
	HEIGHT OF SEAT A.	TOTAL SEAT DEPTH D.	HEIGHT TOP SURFACE B.	VERT KNEE CLEARANCE C.
5/7	11"	9 <sup>3</sup> / <sub>4</sub> "	18 <sup>1</sup> / <sub>2</sub> "	17"
7/9	12 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	20 <sup>1</sup> / <sub>2</sub> "	19"
9/11	14"	12 <sup>3</sup> / <sub>4</sub> "	22 <sup>1</sup> / <sub>2</sub> "	21"
11/16	15 <sup>1</sup> / <sub>2</sub> "	14 <sup>3</sup> / <sub>4</sub> "	25 <sup>1</sup> / <sub>2</sub> "	24 <sup>1</sup> / <sub>2</sub> "
16/ADULT.	17"	16"	27 <sup>1</sup> / <sub>2</sub> "	25 <sup>1</sup> / <sub>2</sub> "





FURNITURE - DEVICES - SERVICES

To achieve flexibility a different attitude to furniture design is required

-- design a range of related items.

of immediate flexibility not for production economy, rather than economy in use. Teacher/pupil use is showing that this approach in fact provides more variety of choice than the traditional ad hoc design of each article, and at the same time provides much more visual unity in all their juxtapositions. There are now many chairs for general classroom use available throughout the world designed to anthropometrically recommended dimensional criteria and few that add anything to the quality of the space in which they are used. The majority of those seen in South Australia are no exception. The marked difference in the use of space with more appropriate furniture is already apparent in existing open plan school units. The 'old' standard furniture in schools lacked versatility. Designed rather self-consciously as 'pieces of furniture' they are relatively expensive and do not fulfil adequately their function.

4) Services

- a) It is becoming less possible to categorise the rooms in schools as those with or without services. Increasing services are required everywhere - especially electricity. The division between practical areas and non-practical areas is becoming less distinct. Flexibility is seriously inhibited if one does not adopt a policy of 'plugs everywhere'. This suggests that isolated outlets that so often disfigure or inhibit the use of walls should be replaced by service droppers and horizontal trunking in or on walls. Wherever possible, services should be kept out of furniture so that mobility is preserved.



SERVICES

- increasing services are required everywhere
- service droppers, horizontal trunking.

b) Air Conditioning, Heating and VentilationAir Conditioning

On survey, little if any, air conditioning was found in any schools in South Australia other than in the Samcon System building units where it is integral - though not universally employed - aspect of the design conception of the low mass structure.

Much consideration is currently being given to the necessity for air conditioning in schools within the State.

It is necessary to bear in mind that schools now being erected will probably still be fulfilling a function as schools in the year 2000 and further, by which time the level of sophistication expected in buildings will have been markedly uprated.

Heating

Ducted warm air at ceiling level has been employed in the existing open plan units until recently but there is now a gradual change to evaporative cooling systems (roof mounted units) as these are being found to be very appropriate to the new school patterns being evolved.

Ventilation

This generally has been in the form of natural ventilation and will probably continue to meet a good part of ventilation needs, e.g. cross-ventilation.

The use of rooflights with ventilators on the South facing glass, located near the centre of a wider span 'open building' may promote a 'stack' effect and assist ventilation by drawing from the periphery; alternatively, extract fans may be necessary.

Both of these methods, however, draw air into the building through filters no better than fly screens which, in many areas and at certain times of the year, will mean the entraining of dust. If forced ventilation of air through heater is used, it will permit adequate filtration and the more positive pressuring of the building will tend to cause exhausting through the windows and would lessen dust.

Window ventilators should neither project into the room or outside where pupils may collide with them. Either louvres or vertical sash would minimise draught at the working level, such as occurs with horizontal sliding sash with a low sill level.

c) Water, Power and Gas

Water

It was observed in existing schools (traditional) water was generally only available in lavatory areas. With new trends in education - and school building design - easy access to water is required.

Power

No school visited (apart from the new open plan units) was adequately equipped with socket outlets, with the result that with the equipment already possessed by schools, long leads stretched dangerously throughout the class area. With the new school designs, problems become apparent because of the relatively large floor areas devoid of permanent walls. The periphery is adequately served (walls) or columns utilised, but to prevent limited use of equipment other locations for outlets must be used.

Floor outlets should be avoided because of breaking floor finish, projecting flaps or removable caps and problems of dust or dirt. Thus, a ceiling outlet must be developed (several are being tested at present).

#### Gas

No gas supply (for teaching purposes) was seen in primary schools.

Gas was provided in high schools.

In the future, gas may be required in primary schools and it is suggested the bottled gas, located in fixed work units, may be used as the occasion arises.

12.0 INITIAL DESIGN PROPOSALS

12.1 The unit to be taught has been the class and the rate of progress has been the pace expected of the class as a whole.

Education is seen as a matter of developing latent powers, cultivating attitudes and providing a rich environment to stimulate growth. This has created a need for a different kind of school in which teaching can proceed flexibly in areas quickly adaptable for different kinds of learning situations.

The first unit to be built to provide the space and facilities for the activities concomitant with modern teaching methods was the 'Burnside' Type - 70 pupil unit.

12.2 'Burnside' Type Unit (2 Class Unit)

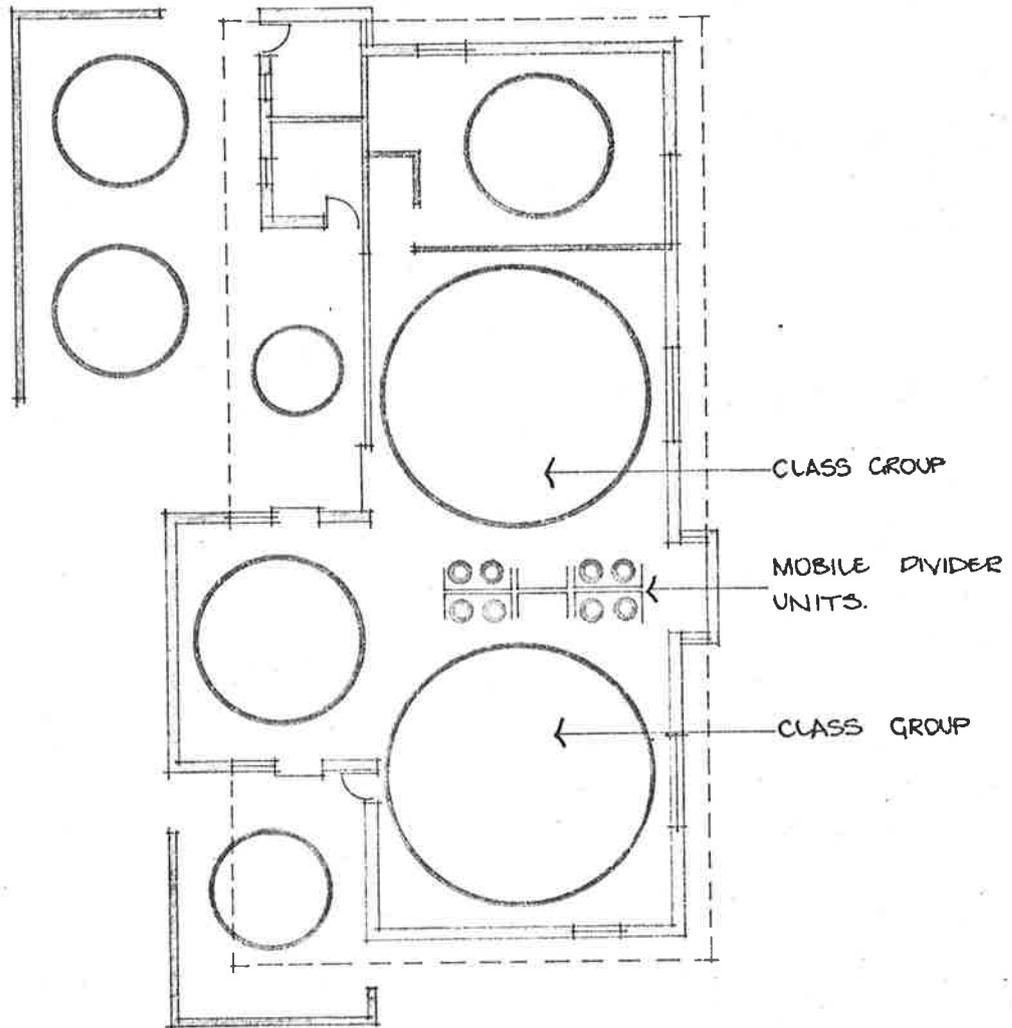
a) The conception of the Burnside unit was to provide a simple space in which two class groups could operate independently, or as a team.

The design sought to provide a much higher teaching area than has been available in any previous schools, without increasing costs, and achieved this by the virtual elimination of circulation space.

As a result of this the general teaching area is 56ft. x 24ft. approximately by  $2\frac{1}{3}$  single standard classroom area.

A science art/craft area 20ft. x 16ft. is provided contingent with the general teaching area and as a resource space to the total facilities provided in the unit; adjacent to this science art/craft area and to the general teaching areas are two covered practical work spaces. These are areas to which practical work or small group work may extend easily and naturally from the teaching areas.

The larger of the covered work areas extends to a semi-enclosed court giving larger areas of containment for work in the open.

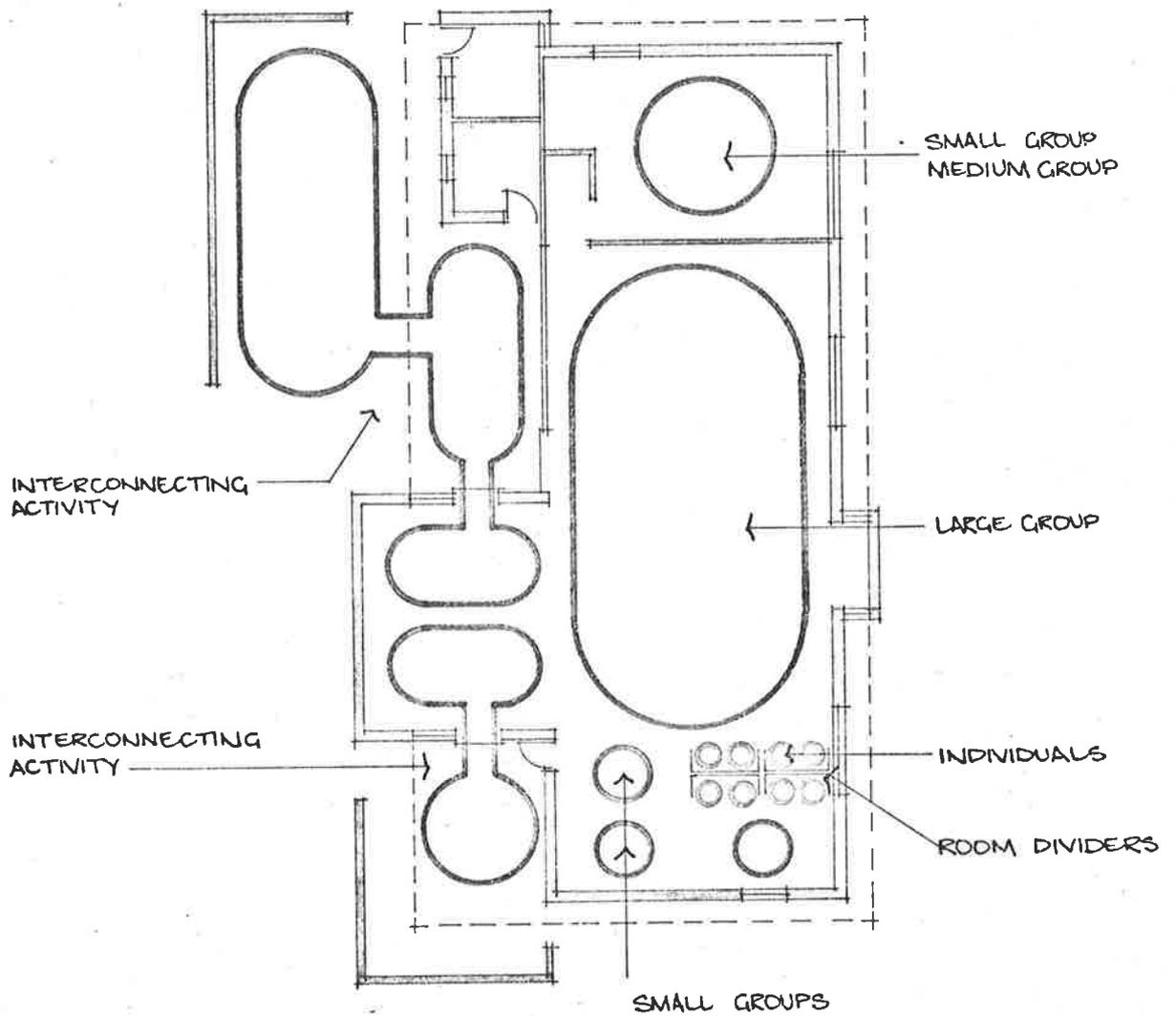


UNIT SET UP TO PERMIT MORE  
 TRADITIONAL 'CELLULAR' CLASS  
 TEACHING DEMONSTRATING  
 POSSIBILITY OF PROGRESSIVE  
 MOVEMENT FROM EXISTING PATTERNS  
 TO MULTIPLE TEACHER TEAM AND  
 INTEGRATION OF CLASS GROUPS.

70 PUPIL 'BURNSIDE' TYPE UNIT.

'FLEXIBLE SCHOOLS' PROTOTYPE PRIMARY.

- b) An essential part of this unit is the provision of an acoustically isolated withdrawal space. This is small in scale and intimate in character and is a particularly appropriate area when a close relationship between the teacher and the group is required. For example, when reading poetry. It serves an equally valuable function at the opposite end of the scale and percussion instrument work can be tackled without obtruding into the activities of the remainder.
- c) There is clear progression of spaces through this building - areas where the individual or small group may work, larger groups approximating to a normal class size and also space for a group of 70 children. Spaces extend from the interior to the exterior by progressive stages; the covered work area providing an intermediate zoning so avoiding the pain which can be caused by moving from relatively subdued lighting conditions into direct and intense sunlight, especially if attempting to read or use white paper. In this teaching unit an attempt was made to design a total environment that was comfortable, warm and inviting, informal, placing responsibility on the children to a greater extent than in the past, and from this seeking an easy natural relationship between children and staff. In the open-space teaching situation, the children are able to work with more than one adult and to discover that it is possible for adults to consider a problem without necessarily coming to the same conclusion. The pupils become exposed to the various skills that individuals possess which can serve to balance the weaknesses that we all similarly possess, thus a teaching team, even only two in number, can be an infinitely more effective unit than a single person in isolation.
- d) In any form of open planning, even as limited as the two class unit, it is essential that acoustic correction is of a high order to prevent an ever escalating noise

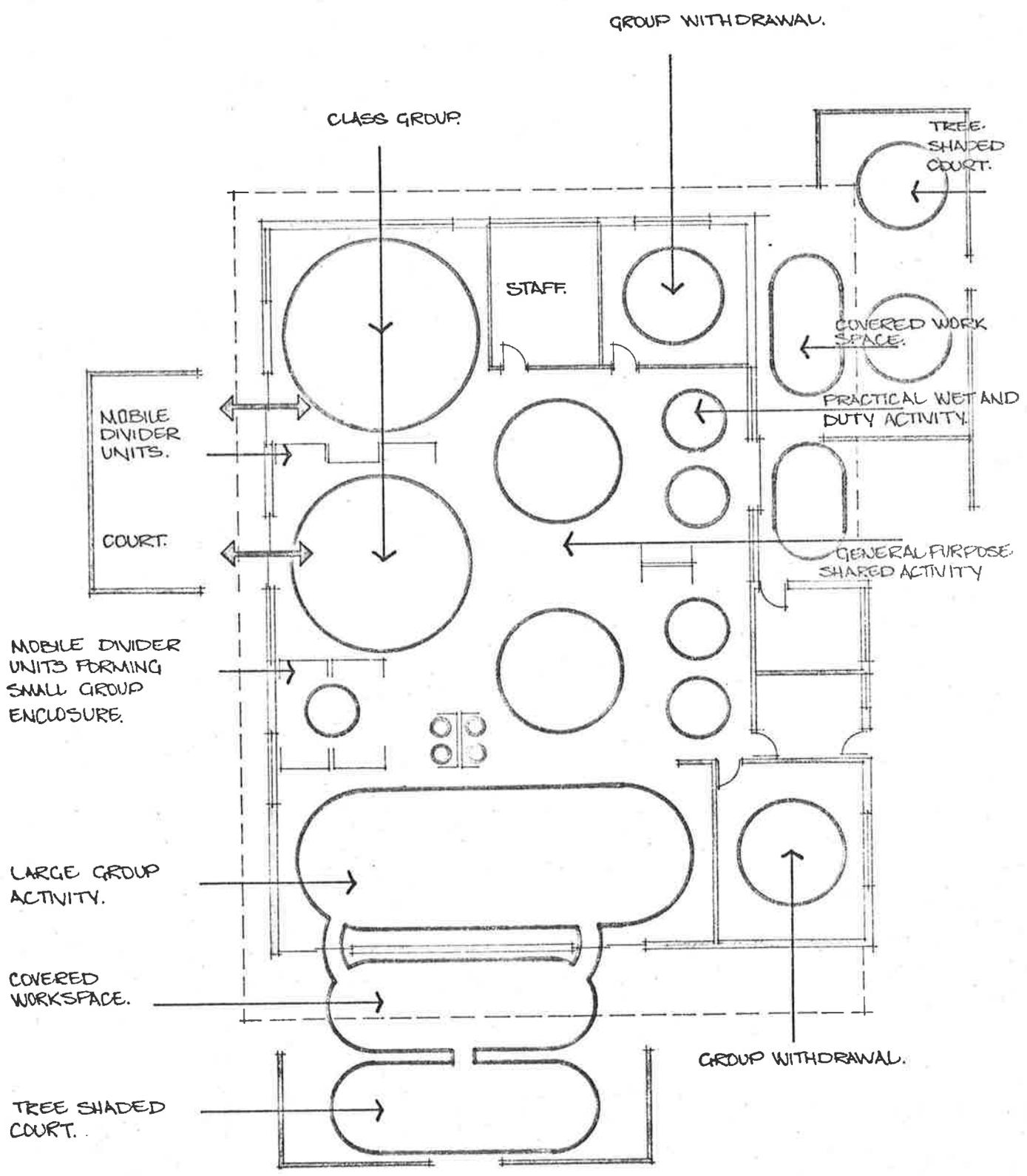


ONE POSSIBLE CONFIGURATION OF  
ACTIVITIES WITHIN ONE UNIT.

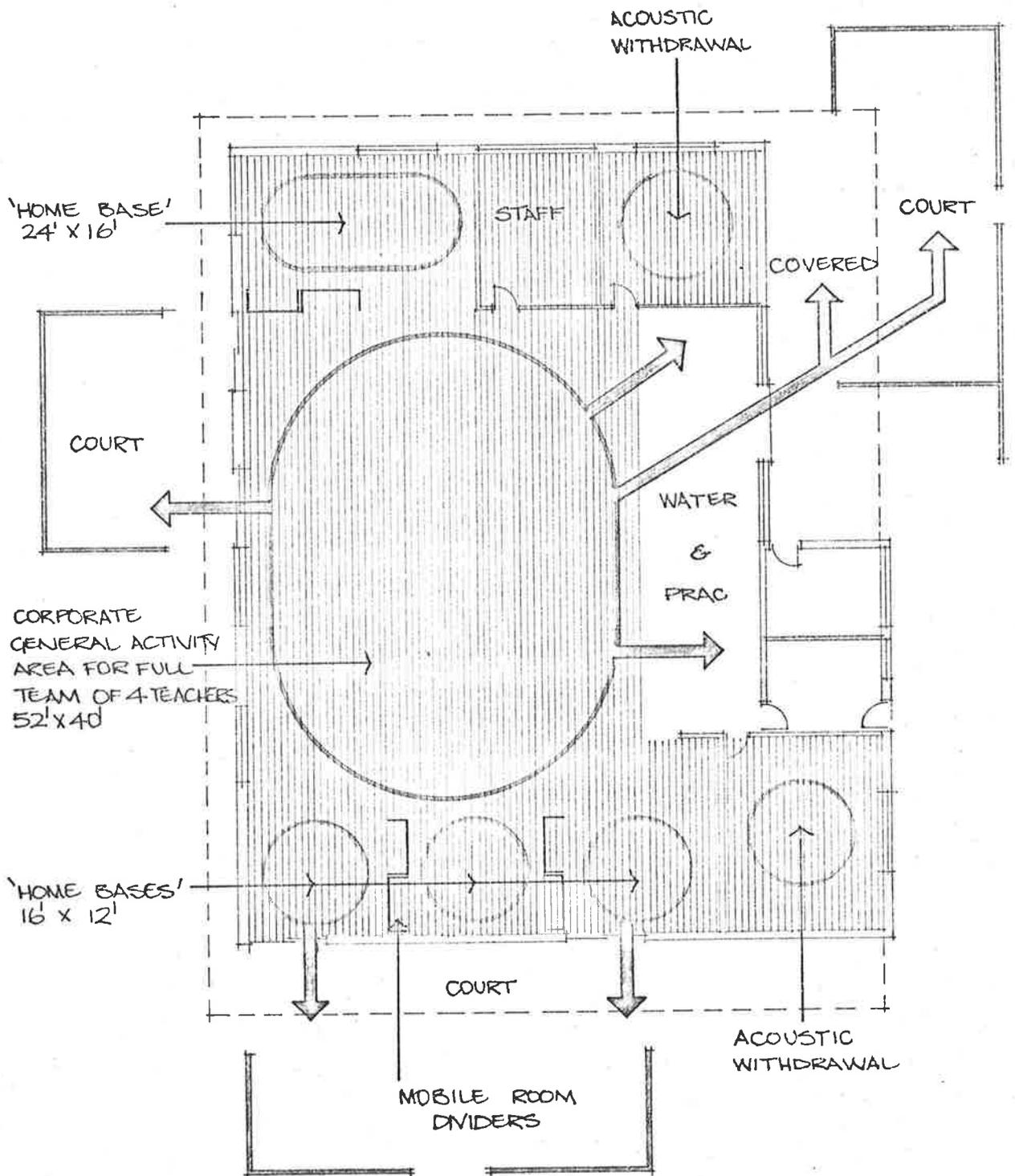
70 PUPIL 'BURNSIDE' TYPE UNIT.  
'FLEXIBLE SCHOOLS' PROTOTYPE PRIMARY.

level in an attempt to even make ordinary conversation heard. Full carpeting in the general teaching area and the withdrawal space provides not only acoustic correction, but also creates comfort conditions in which work may spread from table to floor. It is a most important element in the total flexible teaching concept.

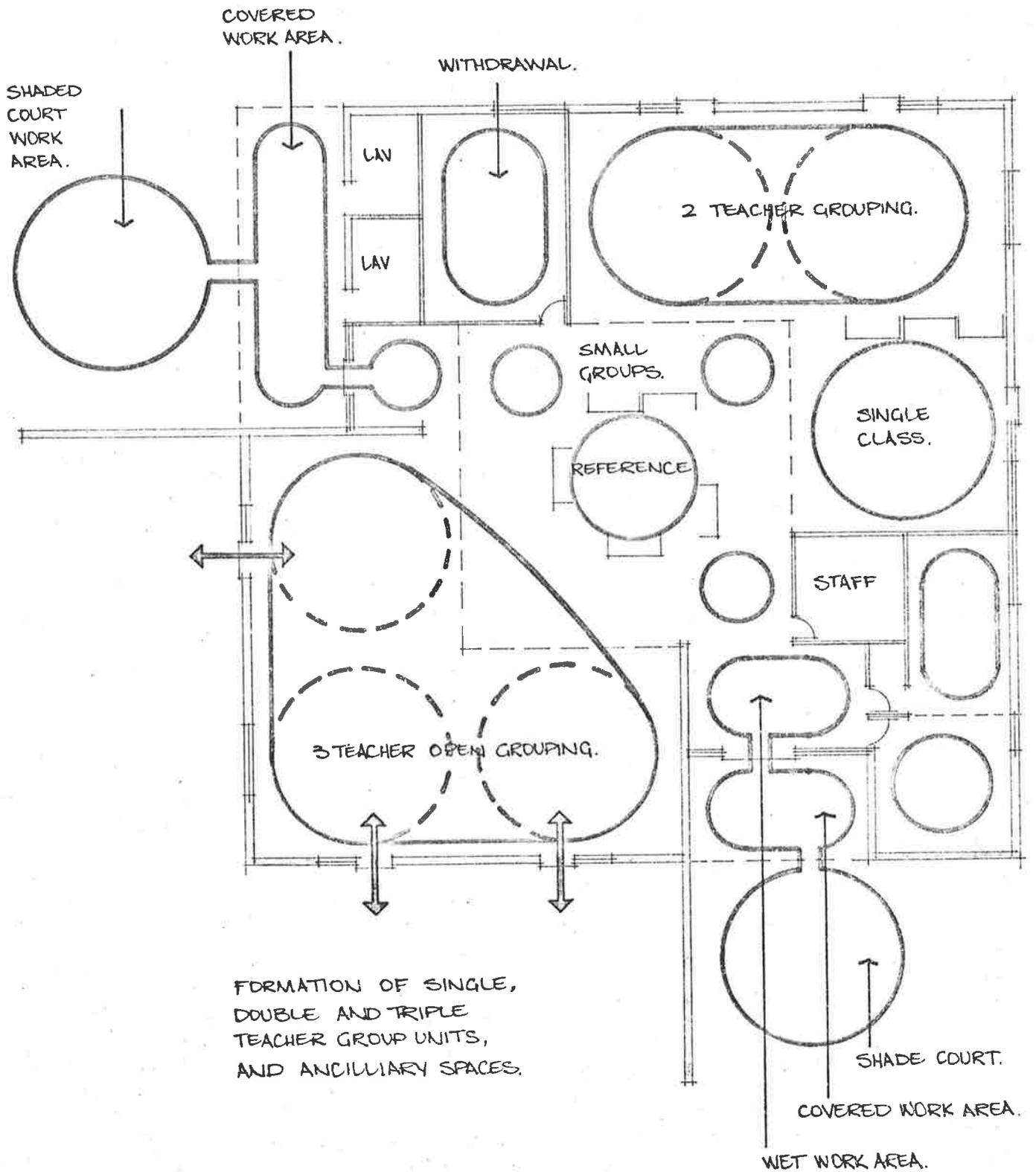
- e) The next school buildings to be constructed in progression were four, then six and eight teacher units, i.e. 140, 210 and 280 pupil units; as a build-up to designing a total open plan school.



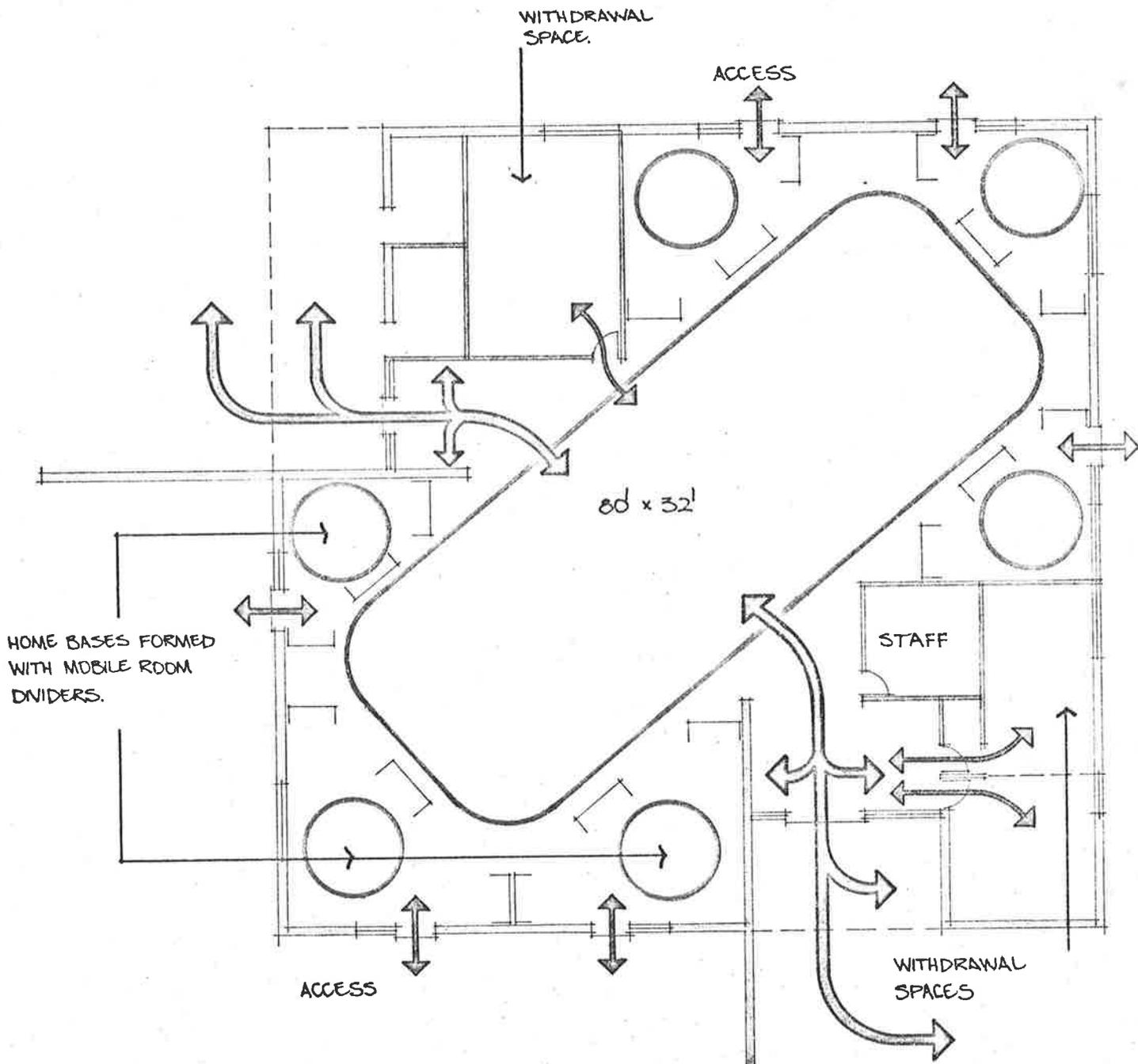
FLEXIBLE SCHOOLS-PRIMARY. 140 PUPIL UNIT SCHEME.



FLEXIBLE SCHOOLS - PRIMARY.  
140 PUPIL UNIT SCHEME.



210 PUPIL - 6 TEACHER TEAM - UNIT.

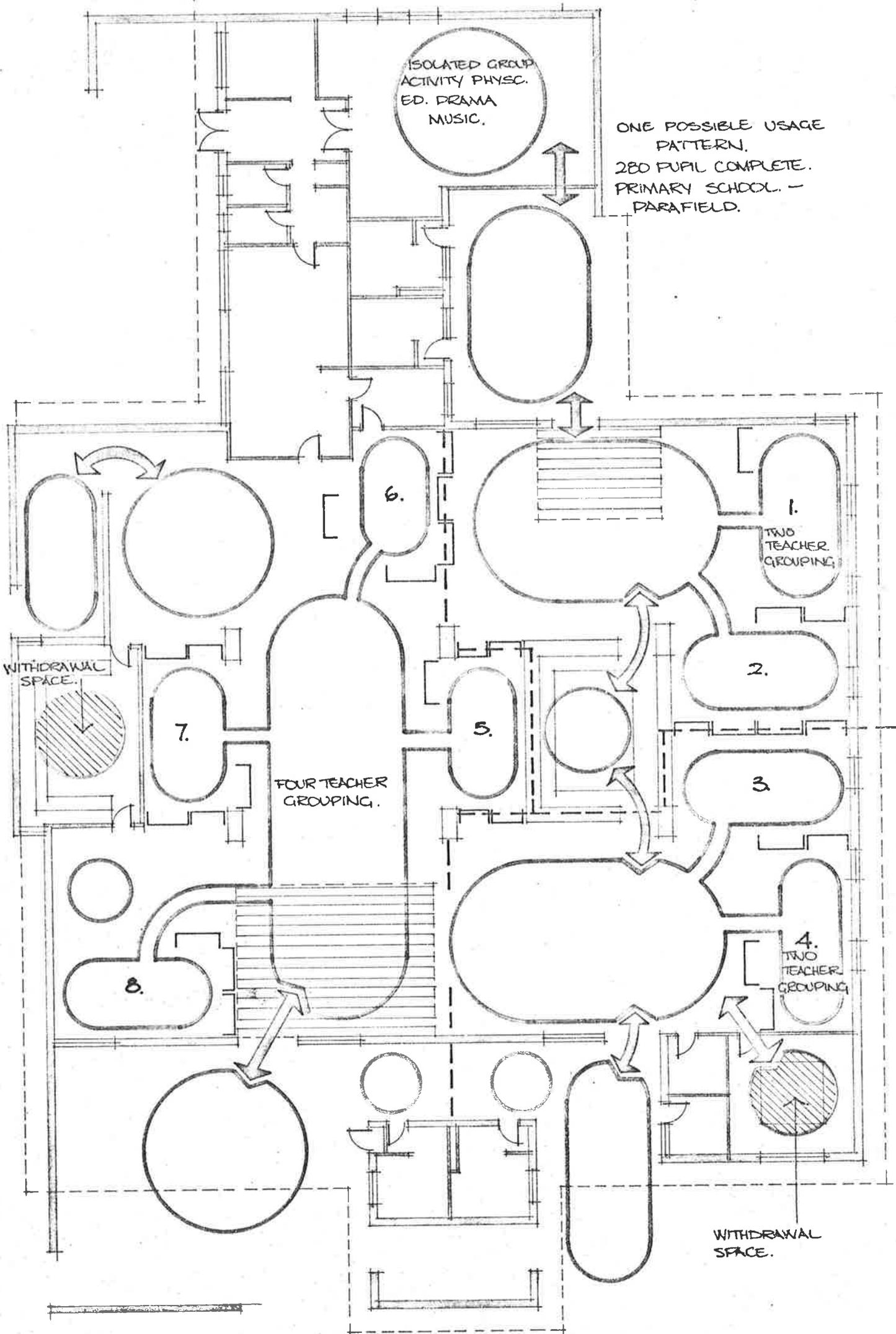


FULLY OPEN USE WITH 6 SMALL HOME BASES, GENERAL SHARED ACTIVITY AREA OF 80' x 32' DIVISIBLE AT WILL.

210 PUPIL; - 6 TEACHER TEAM - UNIT.

ISOLATED GROUP  
ACTIVITY PHYSIC.  
ED. DRAMA  
MUSIC.

ONE POSSIBLE USAGE  
PATTERN.  
280 PUPIL COMPLETE.  
PRIMARY SCHOOL. -  
PARAFIELD.



WITHDRAWAL  
SPACE.

1.  
TWO  
TEACHER  
GROUPING

2.

3.

4.  
TWO  
TEACHER  
GROUPING

WITHDRAWAL  
SPACE.

FOUR TEACHER  
GROUPING.

8.

7.

5.

6.

### 13.0 DESIGN DEVELOPMENT OF A NEW PRIMARY SCHOOL

#### 13.1 Keller Road Primary School

The planning of the open-space school has as its aim the development of the initiative, self-reliance and adaptability of the students who use it.

The initiative and self-reliance of the children is<sup>and</sup> developed and encouraged in the open-space classroom as they are able to move about and converse with little reference to the teacher's authority.

Adaptability will be developed in the children because the open-space classroom facilitates a comprehensive range of changing circumstances throughout which they can demonstrate and test their capacity to remain orientated.

There has been a conscious architectural effort to create an environment conducive to teaching and learning, directed towards promoting an attitude of reluctance among the students to leave the building at recess.

The several factors which determined the design approach for the school were:

- a) The use of the building as an educational tool by such means as exposing the structure and services thereby attracting in the student an interest in his surroundings.
- b) The logical use of natural materials like clay and timber.
- c) The use of interesting textures.
- d) Simple minimal detailing consistent with the domestic scale of the building and the absence of an institutional atmosphere.

- e) The use of interesting colours and the use of colour to define area (e.g. different coloured pinboards in each Teaching Area).
- f) Good design - simplicity and honesty. Interest is achieved by plan configuration and prismatic spaces.
- g) Provision of things about which to display initiative.
- h) Maximisation of building, <sup>flexibility</sup> to accommodate change of circumstances.

### 13.2 Planning - Generally

The planning has developed the concept of three six-class teaching areas grouped around a central Administration Centre and planned along North-South, East-West coordinates to simplify sun control. Planning makes provision for the possibility of one further six-class teaching area to be added in the future, but with some relatively minor adjustment to the location of the building on the site, it would be possible to add a further six-class teaching area giving a possible total of five teaching areas closely grouped around the Administration Centre.

#### Planning - Administration Centre

The Administration Centre is directly accessible from the car park and offices for the Principal and Deputy Principal will be reached directly from the Entrance Lobby. A large Staff Room for both male and female staff is planned immediately adjacent to these offices with direct access to Staff Toilets.

Student facilities within the Administration Centre comprise an Activity Area, a Resource Area, an Amphitheatre and a Canteen.

The Activity Area will be used mainly for general activity by the lower section of the school, but will also be available to the remainder of the school for activities such as gymnastic and drama work. The roof trusses will be 16ft. from the floor and will be capable of carrying loads imposed by gymnastic equipment. The space will be capable of subdivision by means of a folding door and a small store will be constructed directly off the Activity Area for storage of gymnastic equipment and the like. Provision will be made to visually and acoustically separate the Activity Area from the rest of the school.

The Resource Area will be fitted out with library shelving, carrels and appropriate electrical outlets and fittings for the various electronic aids and equipment used in such areas.

The Amphitheatre will be an external paved area surrounded by cloisters to provide some protection from the elements and the Canteen will be nearby with associated storage facilities.

In addition, there will be a Central Plantroom, a female Rest Room with associated toilet and central storage space for books, milk, gardening, sports equipment and cleaners supplies.

### 13.3 Teaching Areas

The equivalent of eighteen classrooms will be provided in open space teaching areas with associated withdrawal rooms on the basis of one withdrawal room for each 105 students.

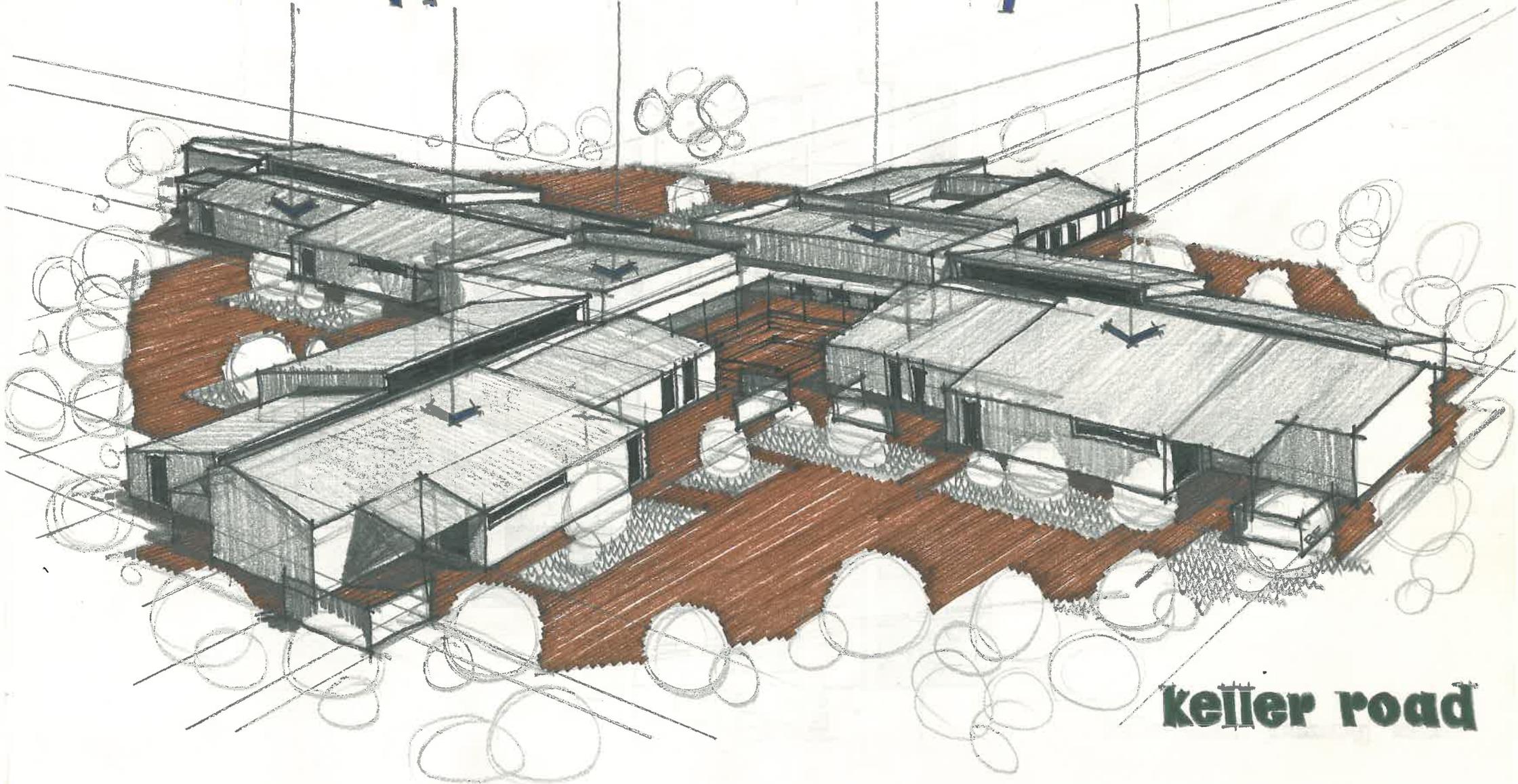
In addition, there are wet areas, preparation rooms to accommodate three teachers each, storerooms, toilets for students and outdoor teaching areas.

The planning of the teaching areas has been developed to provide space to allow teachers to maximise opportunities and techniques and to provide for the students comfort, interest and a sense of belonging to a particular area within the total space.

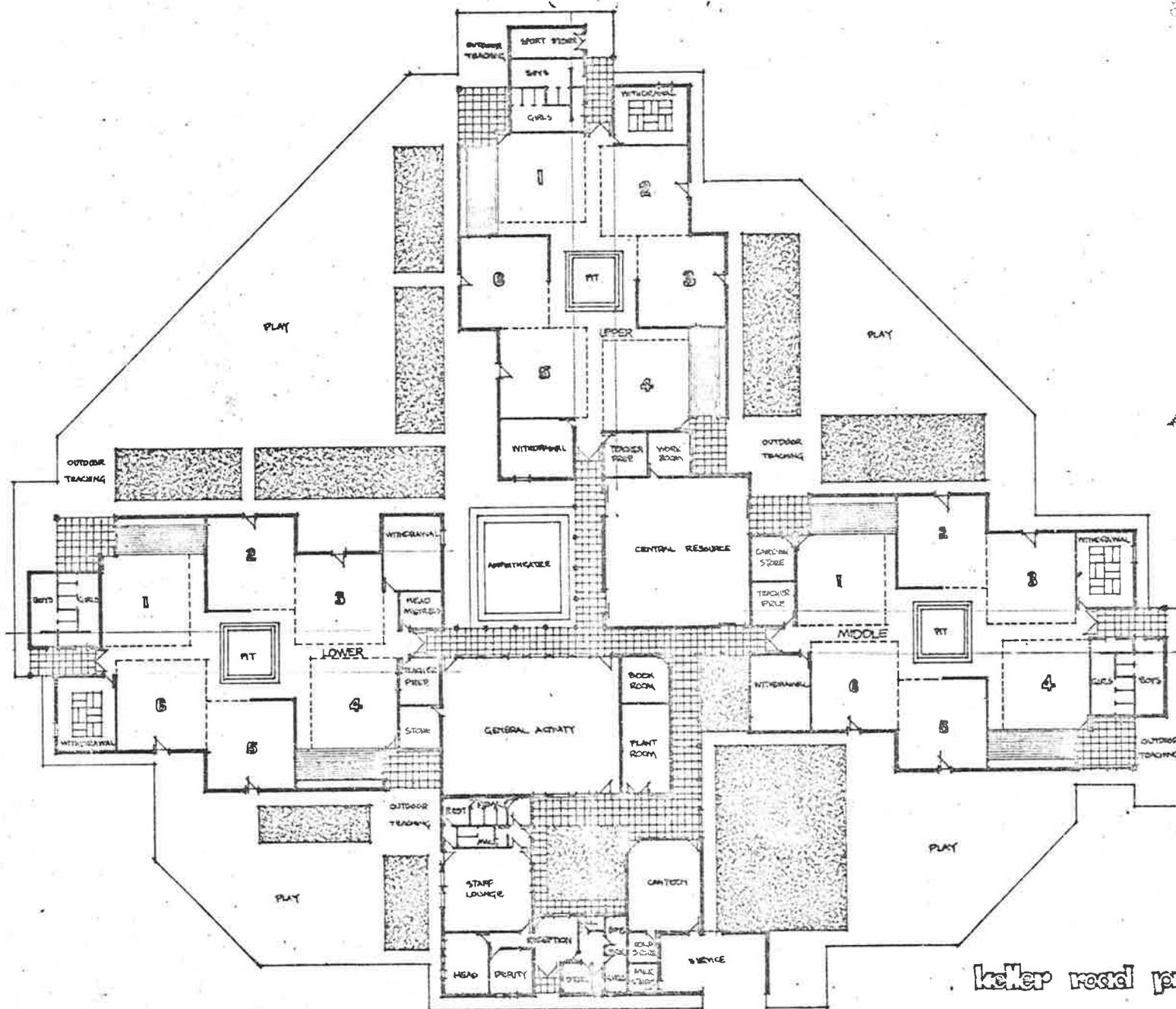
The double pitched roof, together with the low ceiling of the spine achieves a small scale in a large floor area and provides light without distraction to the student. The area between the pitched roofs is also useful to conceal mechanical equipment and other services.

Special precautions will be taken to ensure noise reduction between classroom areas and withdrawal rooms where especially quiet or noisy activities will take place. Noise will be adequately controlled in teaching areas by the use of acoustic ceilings, carpeted floor and wall mounted and free standing pinboards. There will be easy access from indoor to outdoor teaching spaces. These spaces change character progressively as the students move through the Covered Area and Outdoor Teaching Area to the Play Areas. The Teacher Preparation Rooms will provide a home base for each teacher in his teaching environment and will enable a degree of preparation which was unobtainable previously in the social environment of the classroom. Generally, changes in floor level occur at access points and levels of surrounding paved areas etc have been controlled by the extensive use of ramps to maintain a high degree of safety and comfort. Steps, where necessary, have been restricted to alternative entries and outdoor covered area extremities.

**middle - upper - resource - activity - lower**



**Keller road**



Keller road primary school

14.0 DESIGN DEVELOPMENT OF A SECONDARY SCHOOL -  
PARA VISTA - PARA HILLS

14.1 The New Conception of Secondary School

In 1973 the first two of a new type of secondary school was occupied at Para Vista and Para Hills. These schools were comprehensive in the sense that they catered for all tracks and provided facilities in the one school previously available in separate High and Technical High Schools. ,

Not only was the arrangement of the buildings and the internal planning of the teaching areas greatly different, but the use of open spaces required new teaching and organisational approaches. Obviously, with the introduction of such wide changes, all involved in planning and using the new schools needed to develop the utmost flexibility in their attitude and approach.

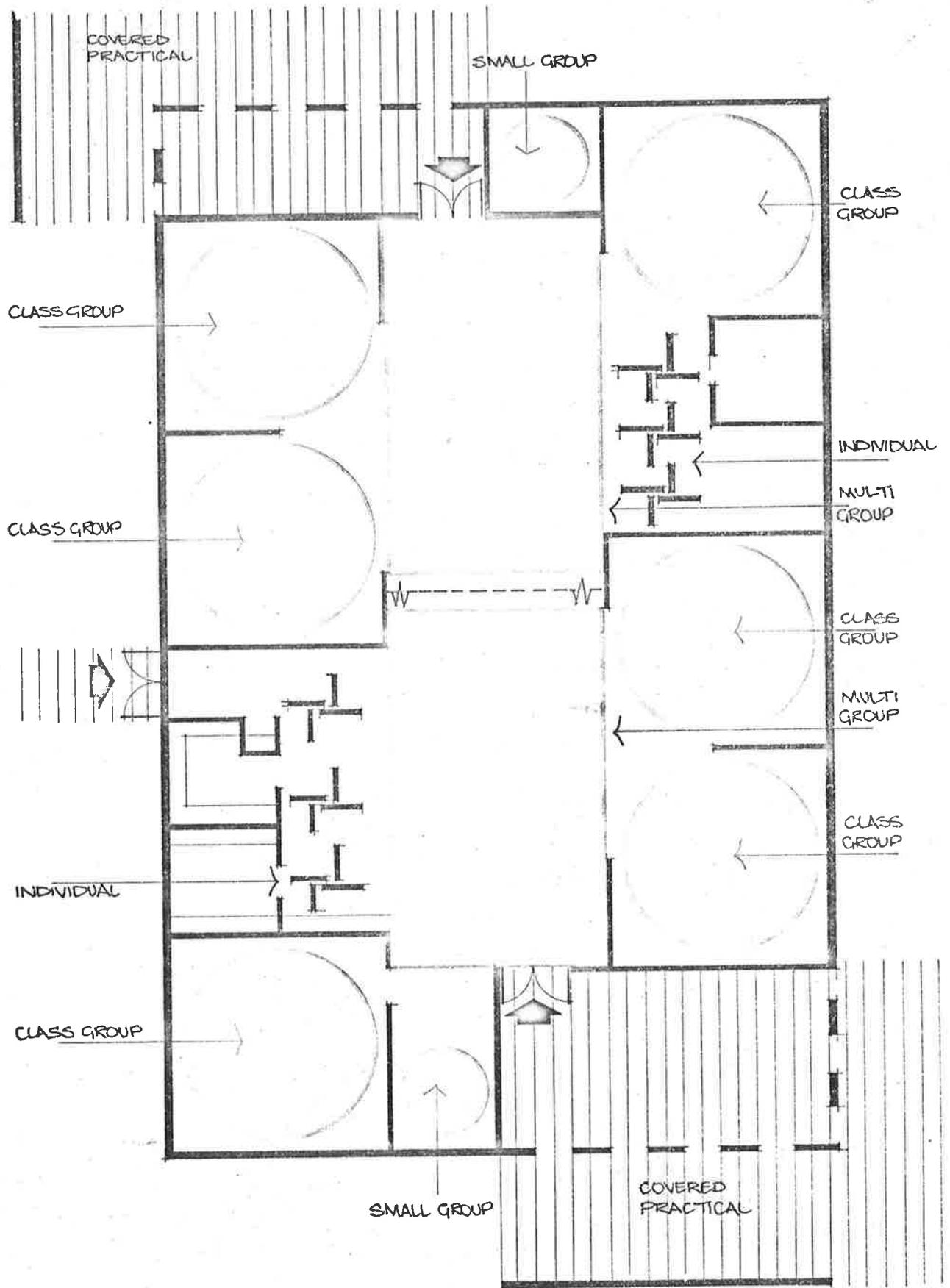
Para Vista High School was planned in the light of the Secondary Division Building Report of 1969 which was compiled after close liaison with educationists at all levels. The site plan of the school shown here allows for six separate buildings to accommodate five faculty or year groups and an administration block. Provision has been made for open-space use of all teaching areas, although in four buildings there are enclosed withdrawal areas for specific teaching use. From the outset it has been possible to plan for integrated Art and Craft facilities, and Science accommodation to include a Fifth Year Centre in close association with a Commonwealth library resource centre, a music suite and a multi-purpose activity area suitable for indoor physical education and drama.

#### 14.2 Description of the Project and Implications of the Design

The six buildings and associated site works in each school have been designed to accommodate 1,250 students. Because modern teaching methods already require multi-purpose use of teaching areas, open planning has been included to allow for the utmost flexibility in teaching methods and the grouping of students. The traditional corridors have generally been replaced by wide team-teaching spaces. A new approach to built-in fixtures and the introduction of more mobile furniture units are intended. It will be possible to adjust the teaching spaces with little effort either by means of mobile room dividers to give visual separation or sliding wall panels and accordion doors. An acceptable acoustic environment has been created by the extensive use of carpet and acoustic tile ceilings in the teaching areas.

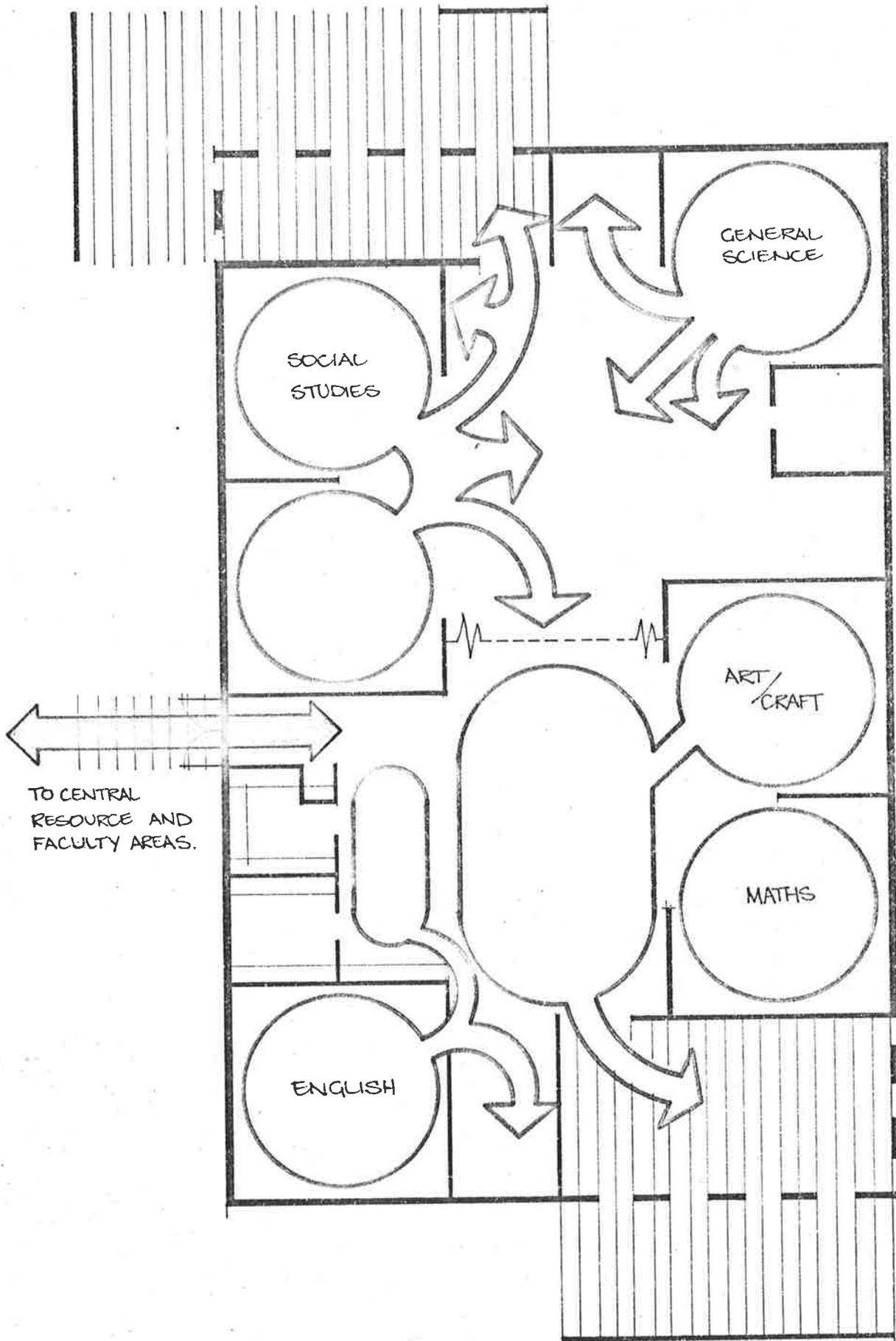
Because of the unique plan form of the buildings, an unusual heating and ventilation system has been developed. Central ceiling spaces will be pressurised and air released to all areas through slots in the ceiling.





SEPARATE UNIT SPACES.

SECONDARY SCHOOLS. NOTIONAL LOWER SCHOOL UNIT.



OUTFLOW FROM CLASSGROUPS TO ASSOCIATED SPACES (INDICATING ONE NOTIONAL PATTERN) SECONDARY SCHOOLS.  
 NOTIONAL LOWER SCHOOL UNIT.

15.0 ASSESSMENTS OF QUESTIONNAIRES, PERSONAL SURVEYS  
DISCUSSIONS AND MEETING WITH RESPECT TO OPEN SPACE  
EDUCATION

15.1 Introduction

During January, 1972/73 brief questionnaires were sent to each State Education Department enquiring about flexible open-space schools. Replies were received from the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania, Victoria and Western Australia.

The primary purpose of the questionnaire was to initiate contact with each State Department in relation to open-space education and to identify the extent of open-space education in Australia.

Confusion in terminology was reflected in the replies.

Do infant schools, infant and primary schools and junior primary schools refer to the same age group?

How many classroom equivalents are reflected in each State's response to the question about the number of open-space units/schools? What, in fact, does each State mean by open-space units/schools?

This questionnaire has indicated that the majority of Australian States are involved in open-space education. However, as Mr. Briggs from Western Australia has written,

"There are.....a few matters of definition which need clarification in any assessment of the National situation". With this in mind, a more exhaustive and comprehensive follow-up was initiated.

Question: How many open-space schools and/or open-space units will be constructed within the next two years?

Australia Capital Territory	Queensland	New South Wales	South Australia	Tasmania	Victoria	Western Australia
<u>OPEN-SPACE SCHOOLS</u>						
5 infant schools	no reply	1 infant school	4 infant schools	0 infant schools	6 infant and primary schools	2 junior primary schools
7 primary schools	16 primary schools	6 primary schools	12 primary schools	4 primary schools		14 primary and junior high schools
0 secondary schools	0 secondary schools  6 special schools	0 secondary schools	4 secondary schools	0 secondary schools	(see comments)	4 secondary schools
<u>OPEN-SPACE UNITS</u>						
10 infant schools	no reply	no reply	0 infant schools	0 infant schools	(see comments)	24 junior prim- ary schools
13 primary schools	60 primary schools	no reply	47 primary schools	6 primary schools		280 primary schools
0 secondary schools	5 (approx) secondary schools  1 special school	no reply	16 secondary schools	3 secondary schools		12 stages (each stage to hold 300 students) secondary schools

Question: Does your state have available information about the open-space schools and/or open-space units in your state?

Australia Capital Territory	Queensland	New South Wales	South Australia	Tasmania	Victoria	Western Australia
<u>DOCUMENTED OPINION</u>						
yes	yes	yes	being prepared	no	no	in the course of preparation
<u>DOCUMENTED RESEARCH</u>						
yes	no	yes	being prepared	yes	no	in the course of preparation
<u>DOCUMENTED EVALUATION</u>						
no	no	no reply	being prepared	no	no	in the course of preparation

Question: How many open-space schools and/or schools which have open-space units will be functioning in February, 1972? (please do not include library resource centres as open-space units).

Australian Capital Territory	Queensland	New South Wales	South Australia	Tasmania	Victoria	Western Australia
0 infant schools	1 infant school	0 infant schools	5 infant schools	0 infant schools	1 infant and primary school	3 (24 class- room equivalents) junior primary schools
6 primary schools	44 primary schools	0 primary school	49 primary schools	5 primary schools		33(238 class- room equivalents) primary and junior high schools
0 secondary schools	0 secondary schools	0 secondary schools	0 secondary schools	6 secondary schools	5 secondary and technical schools	3 (7 stage equivalent secondary schools
	7 special schools					

Question: When was the first open-space school or open-space unit functioning?

Australian Capital Territory	Queensland	New South Wales	South Australia	Tasmania	Victoria	Western Australia
1971	1968	not applic- able	1969	1970	not known	1970

COMMENTSVictoria

It is difficult to answer these questions accurately. Information is not readily available as yet. Some schools have converted portions of old buildings to open areas. There would be approximately twenty schools in all divisions under construction. Our move into "open-space" planning is on an experimental basis and in the development of the plans we endeavour to ensure that schools could revert to past standards or be adapted to other configurations either in whole or in part as time and function demand.

Western Australia

....There are possibly a few minor matters of definition which need clarification in any assessment of the National situation. Our current secondary school is designed on the "campus" or "faculty" pattern and is built as a four stage project - one stage corresponding to growth during each of the first three years and the fourth stage catering for the upper school....

15.2 Student Teacher Reactions to Training in Open Plan Schools in South Australia (May 1972)

A group of fifty Adelaide Teachers College students attended a course of seminars on the philosophies behind the open plan schools and were then interviewed by the author of this thesis and asked to write an essay stating their individual reactions to working within the open plan situation, and the impact of team-teaching.

This group of student teachers indicated that extensive curricular revisions in teacher training must be made in order to provide adequate preparation for teaching in open plan schools. The student teachers' opinions were obtained in interviews when they were midway through their experience in the open plan schools. The student teachers responded freely to questions regarding their training in team open plan, their perceptions of team-teaching and their reactions to the entire teacher preparation programme.

Reaction to Training in Team-Teaching Schools

Most of these student teachers would have preferred to be in a self-contained classroom for their student teaching experience. They were about evenly divided as to their choice of teaching organisation for permanent employment.

On questioning, only 43% expressed a preference for student teaching in a team organised school. However, about three-fourths (73%) of these student teachers rated the team organisation preferable to the self-contained classroom for the observation experience during the term prior to student teaching.

These students liked the early opportunity to observe several teachers at work, but in actual teaching, they preferred the one-to-one relationship and the consistency associated with supervision by a single teacher in the self-contained classroom.

Approximately 64% of the student teachers indicated that upon graduation they would prefer a teaching position in an open plan school to a position in a self-contained classroom.

Although supervision by teams was at times confusing, it was advantageous in some important ways.

A basic issue in training in an open plan setting is the supervision by teams rather than through the conventional one-to-one relationship (It is interesting to note that the situation faced by the student teacher parallels that of the pupil taught by a teacher team).

Student teachers generally agreed that it is confusing, especially in the beginning, to be confronted with the different styles, values and expectations of several teachers. Adjusting to these differences is quite difficult for certain student teachers, but in spite of the problems, most student teachers agreed that learning is maximised by exposure to four or five different models. They found distinct advantages in the opportunities to observe several styles of discipline and teaching methods and to consult with different teachers.

One student teacher pointed out that this multiple model situation freed her to develop her own style rather than attempting to become a stereotypic replica of a single supervisory teacher.

Another student noticed that when assigned to only one teacher a personality conflict could be disastrous; in working with a team of teachers, conflict with one is less crucial.

Student teachers regretted the lack of opportunity for regular participation in team-planning sessions. They thought team conferences would be ideal occasions for learning how professionals deal with problems. Often the student teachers' busy schedules prevented attendance at team meetings, but some teams did not invite student teachers to join the team conferences.

Teams frequently used student teachers to take over pupil responsibility in order to free the regular teachers for team meetings. Keeping pace with intricate team scheduling was difficult. Response to this kind of pressure varied with individual differences. The rigid scheduling required by team organisation was frustrating to most student teachers. Student teachers expressed conflicting reactions to the effect of the team approach upon their relationships with pupils. In discussions student teachers were questioned about the quality of student teacher-pupil relationships in the open plan school. Their responses were equivocal. Some students thought that the team design facilitates sensitivity to different types of pupils and awareness of their needs; they attributed this growth in psychological expertise to the larger pool of pupils available for contact. However, a number of student teachers complained of the difficulty in team teaching in learning names, knowing pupils personally, and understanding their backgrounds and individual needs. Even though they worked at times with these pupils in small groups, the responsibility for large numbers made development of close relationships difficult, according to many student teachers.

#### Observations of the Impact of Team-Teaching upon Teachers

Student teachers viewed the "time-bind" as the most serious problem of team teachers. Student teachers reflected that much effort is required in order to team effectively. They were concerned to find that frequently team teachers do not have adequate time either to plan together or to work out individual teaching plans. They found that often team teachers extend their working day into late afternoon conferences and into evening hours devoted to individual planning. Much lost time was observed in teacher and pupil movement. It was also noted that planning sessions

were sometimes devoted to peripheral topics.

The rigid schedules of team-teaching seemed constricting to student teachers.

Interpersonal conflicts afflicted some teams, but successful team functioning appeared to enhance opportunities for professional stimulation and peer socialisation. A basic difficulty in team organisation, according to the participant student teachers, lies in the area of interpersonal relationships within the team. Teams are sometimes immobilised by personality conflicts, lack of cooperation, lack of interest or frank dislike of team-teaching. The teachers who oppose team-teaching are often obstructive and take up much of the team's energies and time in the effort to "drag" them along. Authoritarian leadership was perceived to be a frequent factor in creating interpersonal problems.

The impact of team-teaching upon teacher individuality and creativity was deplored by some student teachers who believe team-teaching reduces autonomy, enthusiasm and deep personal involvement in the teaching process. The feeling of personal achievement and success were at times lacking. Unhealthy dependencies between teachers were noted, but some student teachers thought that team-teaching leads to improved teacher mental health through the opportunity for utilisation of special teacher talents and interests and through more extensive opportunities to socialise with peers and to share professional ideas.

According to student teachers, the qualities needed for team teachers are cooperation, flexibility, belief in the project and "youth". Student teachers disagreed as to the effect of team-teaching upon the relationships between professional teachers and their pupils.

Student teachers noticed at times a lack of teacher-child involvement in the team setting. They thought there might be a loss of enjoyable and rewarding relationships with children which are very important to the career teacher.

and  
non-team-  
teaching

They regretted that team-teaching is subject-oriented at times, rather than child-oriented. A different point of view was expressed, however, by some student teachers who found team-teaching rewarding to teachers because of the more varied teacher-child relationships.

Student Teacher Perceptions of Team-Teaching Impact Upon Pupils

In evaluating the suitability of team-teaching for elementary school children, student teachers discriminated among different groups of children. In response to a question as to whether the self-contained or team-teaching organisation provides a better learning environment for different pupil groups, most student teachers considered the team environment to be superior for the intellectually deviant, both slow learners (according to 73% of the student teachers) and the gifted (88%). Sixty seven percent of the student teachers regarded the self-contained classroom to be preferable for emotionally disturbed children. For the bilingual child and the average child, no clear-cut organisation preference was indicated by student teachers.

Team-teaching was thought to provide excellent opportunities for individualising instruction; but the criterion of homogeneity of ability, widely used in these schools for grouping decisions, was questioned. The student teachers concurred that the team approach provides increased opportunities to individualise instruction; but there were <sup>various</sup> controversial reactions to the almost exclusive use of the criterion of homogeneity of ability for arranging groups. Student teachers observed that low-ability students received badly-needed attention through this grouping practice and that greater homogeneity may provide increased precision in diagnosis and more remediation possibilities.

They reported that pupils appear less bored and that they work better together when matched in ability. Pupils, as well as teachers, are not pressed to cope with the extremes of ability found in less homogeneous groups, but the practice of ability grouping concerned some thoughtful student teachers who pointed out that slow groups miss the inspiration of brighter students. Student teachers differed sharply as to the psychological impact upon pupils of the team approach. Vehement, conflicting responses were expressed regarding the effect upon pupils of multiple teacher relationships. Some student teachers thought that team teachers are less involved with individual pupils and that there are more problems due to lack of consistency and continuity in discipline. Conversely, the advantages were apparent; when several teachers work with a child, they are able to share impressions and pool talents to aid his development. In the team situation a pupil can usually find at least one friendly teacher during the day. As one pupil said "It's hard to get five teachers mad at you in one day". Many students see the variety of pupil-teacher relationships as one of the greatest strengths of the team-organised approach; they believe that team-taught pupils are more self-controlled and develop a relatively high degree of cooperation in order to keep such privileges as free movement within the school, independent study and media use. One student teacher who came into the team structure from a term of observation in a self-contained classroom said she was amazed to see how independently pupils work in the team environment. Student teachers viewed with mixed emotions the movement of pupils required by the team organisation.

Implications

Student teachers responded sensitively to the unique opportunities as well as to the dilemmas of the open plan environment. Conclusions may be made in two broad areas: the importance of individual differences in adapting to the team approach and the necessity for revisions in the teacher preparation curriculum.

*did they  
identify them?  
Or were they  
built into the  
interview  
questions?*

Although student teachers concurred in identifying the dominant characteristics of the open plan organisation, individual reactions to these features varied greatly. It is clear that certain individuals, whether they be pupils, teachers or student teachers, will not function well in the team structure.

Identification of personality characteristics related to successful work in teaching teams is much needed. Lacking this information, training placements could be improved if student teachers were provided careful and realistic orientation to team-teaching advantages and disadvantages and if individual preferences were considered in placement decisions.

Curricular revisions in Teachers Colleges are necessary for adequate preparation for team-teaching. School administrators college faculty and deans of schools of education found 100% agreement that student teachers should observe and work in such new programmes as team-teaching and flexible grouping, individualising instruction, use of special personnel and media and fresh approaches to curricular planning have been recommended as important elements of pre-service or in-service training for team-teaching.

Very few teacher training institutions have as yet moved to such specialised preparation. Without some retooling of our educational programmes, our antiquated teacher education curricula will retard the development of innovations such as open plan/team-teaching so that we will not be able to give them a fair trial.

16.0 NOTES FROM MEETING OF APPROXIMATELY 100 TEACHERS  
EDUCATORS AND ARCHITECTS HELD AT THE CAMPBELLTOWN  
OPEN UNIT

16.1 Campbelltown Open Space Unit - Six Class Unit as described earlier in Thesis

General Administration - Mr.L.Baxter - Headmaster

The building of the Open Space Unit began in April, 1971 and it was opened in February, 1972.

The Teachers

In 1971, six teachers had been approached and all accepted the challenge to teach in this new situation. Four of these attended an in-service conference at Raywood and visits were made to other open space units - compatability essential.

*When?* Already there has been one change due to transfer and another member joined the team three weeks ago because of a teacher's movement interstate. The team includes five female and one male teacher.

The Classes

Three Grade IV's and three Grade V's occupy the unit. Classes were organised late in 1971 and selection was by chance, heterogenous<sup>e</sup>, all groups being of approximately equal ability. The teachers got to know the children and the records that were to be used were commenced during the first three weeks of 1972 whilst waiting to move into Open Unit. At the outset, teaching in the unit began with six separate classes. Very soon this arrangement expanded. The children were re-grouped and team-teaching developed. Since then, there has been a great deal of experimentation and modification.

Some Aspects of the Open Unit

- 1) Mobility - groups can move flexibly without undue disturbance and all can be seen.
- 2) Less noise of movement of children and furniture. There is a softness in children's movement. Less teacher correction and repression.
- 3) A very natural setting is created. Children are able to talk quietly and freely with each other. This creates a relaxed atmosphere. Very little silly by-play.
- 4) The availability of equipment is a great advantage, e.g. the listening post at hand is easy for children to use. Therefore, it is being used all the time.
- 5) The combined talents of the teachers are available to the children. This gives a professional aspect of planning and working together.
- 6) The Organisation is conducive to dealing with individual differences. Extensive use is made of small group work. The group tends to demand sensible behaviour from its members - more responsible attitude to school and classmates. The equipment lends itself towards this end. It is important that teachers learn to use this electronic gear and train the children to use it. Laboratories help to cater for the individual needs of the children. Here again, the teachers must learn to use the laboratories, e.g. the Listening Skills Programme (an American Programme). An excellent library includes \$300 worth of graded readers. Many avail themselves of the library when other work is completed.

Question Time

1. Have the teachers any previous experience with team-teaching?

No - a lot of group work has helped.

2. Have teachers' aims changed?

A little. In addition to milestones of achievement, they now try to instill in children the avid desire to learn. The building lends itself to this - try to get the children to plan together, to work together and produce something together - that is, to live together as a group. In a unit this can be done on a larger scale than in a single classroom.

3. How were groups attained?

A stream - spelling and reading

B stream -

C stream -

(Gr.4 has streamed Mathematics groups also)

one activity per day for each group(s)

Grade IV - Groups - random selection for daily group time (1 hour)

- Activities:
- 1) Spelling Laboratory
  - 2) Formalities Laboratory
  - 3) Reading Laboratory
  - 4) Social Studies Skills
  - 5) Listening Post and Reading Comprehension (individual cards)

Grade V - Each class divided into 5 separate groups based on attainment tests for spelling and reading, but friendship groups for other areas.

Within a week children cover twelve different topics.

Teacher 1 - Social Studies (18 children)

Teacher 2 - Science - Health

Teacher 3 - Graded reading in resource centre  
( Test)

Teacher 4 - English

Teacher 5 - Composition

In P.M. Group 1 - now groups combined in resource area.  
Pilot Library, Teacher Aide supervising

Group 2 - Reading comprehension - tape recorder  
and Library

Group 3 - Spelling and short compositions

Group 4 - Spelling Laboratories

Group 5 - Reading Laboratories - self-corrective  
and Listening Posts

4. With this planned organisation is there a danger to organise for the benefit of teachers?  
Yes - there are dangers, but this could be contained by (1) other members of group  
(2) Headmaster.
5. How do you cope with the noise of a music lesson?  
How do you organise the grades?  
One teacher specialises - we alternate Science, Health, Music - Music in two withdrawal rooms - two teachers.
6. When do you plan?  
During the half hour 2.40 - 3.20pm while the aides and Deputy Heads supervise. Teachers retire to preparation room. Much is done before school and during the lunch time.
7. Is there any danger that teachers could become over-specialised?  
Not evident as yet, but there could be a danger. (Teacher must take some interest in all subjects).  
Complete compatibility between teachers is absolutely essential.

8. In what ways have teaching methods changed in the unit?  
Not very much - a lot of group teaching done in previous class.
9. Will children in this unit continue through school in this situation?  
No - however, we hope that teaching in Grade VI and Grade VII will not be in a 'box'. We believe the training obtained in the Open Unit will carry through to the classroom situation for group work and individual responsibility etc.
10. What is the capital costs of buildings compared with conventional buildings?  
The Open Space is only marginally cheaper.
11. How is progress recorded?  
Home base teacher compiles records.
12. What emphasis is given to drama, music and art?  
Specialist key teachers are used. Other teachers also participate. Teachers take own class for art/craft.
13. Do you feel that you are losing personal contact with children?  
We found less contact at first, therefore extended the morning period with own class - until 9.30am.
14. Do you think six teachers are too many to maintain sufficient personal contact with children throughout the day?  
We are really working in two groups of three - three IV's and three V's.

15. Has there been any attempt to assess children's attitudes in the Unit compared with other parts of the school?  
Only observation of children in the unit.  
(1) Children's comments - they all like it.  
(2) Children are never at a loss for something to do.  
(3) Often continue work during break periods.
16. How is the teacher/pupil ratio compared with the rest of the schools?  
Unit 1/31, other classes 1/32, Teacher Aides - 4 Aides in whole school, Unit - 1 Aide and 1½ secretarial help.
17. Can an integrated programme be carried out requiring follow through activities?  
It is almost impossible to integrate fully unless running a non-graded school. Teaching planning sessions help.
18. Is there a danger that Open Space as a whole State trend is forcing teachers to teach in subject areas for the teacher's convenience?  
Not necessarily - in any case specialisation can be advantageous.
19. We seem to be comparing units with traditional classrooms. If these six teachers had traditional classrooms with all these excellent facilities, would this not be a fairer comparison?  
No. Space is one advantage.
20. Is there a need for an activity room for art and drama?  
The wet areas are not large enough, but use of plastic sheets over carpeted areas and spill into outside areas increases the space. Withdrawal rooms and resource areas are also used. Dancing is done outside or in withdrawal rooms.

21. Who decided what grades and which teachers?  
The Headmaster (2) Headmasters approached teachers and asked them - did not insist.
22. How much selection of children?  
No selection of children except equal ability groups in and out of Open Unit and children not given a choice. No children have disliked it and all parents are in favour.
23. Is there any feeling that children belong to an elite group?  
We have not been able to detect this. Children seem to accept this. The Headmaster handles this carefully. The success or failure depends heavily on the attitude of the Headmaster. This Headmaster is non-authoritarian - teachers are given a full rein to plan and try and amend. Headmaster is there to advise and decide if necessary.
24. What happens during wet weather?  
Teachers stay in unit with children, but this happens throughout the school.
25. Is there any comparison with the unit Grade V and the single classroom Grade V?  
The children are given the same progress tests. They appear to be the same.
26. Do teachers tend to stay more in their own section?  
Yes, but they meet the remainder of staff fairly often.
27. What opportunities are there for children to be decision makers in their programme?  
I doubt if children are capable of making decisions like this, although they have some opportunity for decisions in use of spare and resource time, art work, project work etc.

28. What is the method of procuring all these aids and the equipment?

Most is supplied by the Education Department to the Unit. Any extras are bought by the school through funds raised by the association, e.g. Canteen, Functions, Voluntary Contributions etc.

Government gives a grant of \$2.50 per child plus \$50 for whole school.

17.0 REVIEW QUESTIONS

*by whom?*

17.1 In 1973/74, a survey was inaugurated on teaching in Open Plan Schools.

A number of Questionnaires (7 sets) were forwarded to Heads of schools and teachers and pupils throughout the State.

The Content of the Survey

Three questionnaires concentrated primarily on the Teaching Staff.

Another one looked at the environment in which they taught and the facilities available to them, followed by a questionnaire looking at the use to which teachers put all these facilities.

One questionnaire examined some of the effects all of the above is having on the child selected to be in the Unit.

Finally, one of the questionnaires requested respondents' 'comments' as to the most significant aspect of their unit environment or procedures - that in their opinion demanded recognition and reproduction for the benefit of all. The intention was to obtain as many varied responses as were possible by asking such an open-ended question.

As the first three questionnaires consider more the Teachers' Personal and Professional Developments, they shall be only briefly outlined so as to provide a basis for the examination of the last four questionnaires which are more directed towards the advantages and disadvantages of various aspects of the Open Plan Building and facilities.

The Survey

The responses were gathered to assist in stimulating and giving focus to further ideas and possibilities more than to give a rigorous design and evaluation. In all there was a 79% response to the questionnaires (36 schools were included in the survey) - 99 sets of questionnaires were distributed.

Specific invitations to four teacher and six teacher units accounted for 21 questionnaires - 21 responses were received.

64 questionnaires went to teachers with more than one year's teaching experience in an open plan unit - an 80% response was achieved.

The Questionnaire Topics are as listed:

- Q.A The Teacher's Personal and Professional Development.
- Q.B Relationships with Open Space Staff.
- Q.C Relationship with others: Senior Staff, other Staff, Parents.
- Q.D Physical Arrangements and Equipment.
- Q.E Teaching Practice within the Open Space Unit.
- Q.F The Open Space Unit and the Child.
- Q.G Significant Findings.

Brief Discussion of Relevant Points from Q.A

- 1) In response to a question exploring the dimensions of personal and professional growth made possible in the environment of open space teaching, two of the more interesting replies were:
  - a) "Personal growth not applicable to open space teaching. I do not feel that I can assess myself in regard to personal growth. There are too many independent variables (e.g. age, marital status, home life) which seem more relevant to personal growth.
  - b) "One obviously tends to become more tolerant, more cooperative and, in my case, more enthusiastic....."

The question arose from the fact that the abovementioned variables - and many more - gain expression with open space teaching. Most of the teachers seemed aware of growth edges and 43% described their growth as 'accelerated'. The question that may now be asked - is accelerated from what? and to where?

- 2) The question on training for teaching in an open space unit evoked a wide range of responses, with teachers requesting that training should be available in teachers' colleges for those who wish it (refer to student teacher comments on page 50 for comparison) and certainly whose occupation of a unit is imminent. It was noted that the teachers from the larger open plan units (six teacher) are the ones whose responses peak on the Teachers' Colleges as the most important training point. Also it was suggested that training has to be a continuous process.
  
- 3) On the question "has open space teaching created pressures on other areas of your life?" 70% of answers replied 'yes' with some of the 'no' answers adding 'because I don't let it' thereby implying that the pressures are there, but they kept them under control. The major effect on the teachers' private life was nominated as 'tiring'. Some respondents answered 'tiring' but 'stimulating' indicating for them open space teaching was hard but exciting work.

Questionnaire B - Points

Questionnaire B was a further development to Questionnaire A and asked how much development of the individual was conditioned and controlled by the staff of the Unit.

- 1) Satisfaction seems to arise generally from:
  - a) The availability of other people who provide sharing, learning, opportunities, comradeship and
  - b) The availability of equipment and a facilitating, aesthetic environment within which to teach.

From some statements returned with Questionnaire B, it was possible to detect that teachers are aware of and enjoy the distinction between 'learning from others' and 'learn cooperation'.

They appear to be developing interpersonal skills and thus gain greater access to the knowledge particular to each teacher - learning to cooperate facilitates learning from others.

- 2) It was found that team cohesion is an issue of which teachers are aware but a facet of open space teaching they do not seek to measure on a numerical scale. Cohesion can reflect and mean so many different things. Some teachers stressed that the size of the team may not be synonymous with the size of the unit.

- 3) The question on involvement in cooperative planning and teaching produced answers which indicated high enjoyment, high participation and high influence. The results to this question presented an encouraging figure.

Questionnaire C - Points

This questionnaire examined relationships with other staff, children, parents and with other adults who perambulate in the educational environment.

It was found the depth of interpersonal knowledge in open space teaching was 'satisfactory'. 96% of the respondents said they knew their home group 'fairly well' whilst 85% said they knew all the children of the unit in the same terms.

It must be noted that the six teacher units had up to 210 pupils, thus making 85% a satisfactory state of personal knowledge. Some teachers drew attention to the interest their unit had engendered amongst parents. Parental involvement as resource personnel was cited as being helpful.

A very high percentage of parents have visited the unit in which their children are taught and teachers indicated by their comments a real shift in parental attitudes from antagonism and scepticism in the short term to interest and enthusiasm as knowledge of the aims and methods of the open plan unit became more widespread.

This is a typical reply:

"Sceptical at first, some now warmly enthusiastic, most now interested, some still antagonistic."

The question then arises after the above typical reply - could it be simply inertia?

Questionnaire D - Physical Arrangements and Equipment

Where the previous questionnaires surveyed more of the Teachers' Personal and Professional development, this questionnaire examined the use teachers and pupils make of the physical facilities and environment. Therefore, the questions and results will be reproduced in full.

Questionnaire D - Points/Discussion

Q.1 Theoretically, there is an infinite variety of furniture combinations available and two respondents who answered "furniture moved too often to give a reliable sketch" and "very flexible" - as we tend to change arrangements of everything in the unit once a fortnight if necessary" - show they are aware of this. It could be said that the respondent who answered "fairly static" was also aware of it. One important question which arises is: "Are the actions for change or lack of it supported by well-reasoned deliberations by the teachers?"

Q.3&4 Results of these questions imply that the open space environment must be geared to accommodate large groups since the largest are most frequently and most consistently used and provisions be made to accommodate frequent groups ranging from four to twelve students. The question arises - Where and on what occasion does a child do individual work where he is alone? Where does a child go who simply wants to be alone? On scrutinising the results, it may be asked - Why are there clusters on certain group sizes?

- Q.4 59% of respondents were content with teaching materials provided - 37% were not.  
Some of the discontent can be attributed to the late arrival of equipment at recently opened units - in relation to Q.6 and Q.7, it was suggested in some cases that the pupil/equipment ratio be improved.
- Q.5&6 100% competence was the response for most pieces of equipment mentioned.  
It was surprising to note a less than 100% competence with the listening posts, 80% of respondents used the television, record player and tape recorder only at least once a fortnight - some of this percentage may be put down to some of the equipment not being available in all units, but the infrequency of use of some equipment must reflect on the equipment as a teaching aid, or is the ratio of equipment to user adequate?
- Q.7 The most significant factor which stands out from the results is the generally high performance scores of pupils in conversion units.  
Regardless of whether the equipment provided in the units is the right equipment or whether or not it is being used most efficiently, the table in Q.7 raises several points:
- a) Have teachers accepted as a learning task for children the development of competence in the use of A.V. equipment - for this 'Technological Age'?
  - b) Is child competence affected by teacher competence?
  - c) Can irresponsible children be allowed to develop responsibility by using equipment needed for the wider education of so many other children.

- Q.8 Shows that low scores were recorded for common domestic items such as radio and television, with increasing scores for lesser known items. Other equipment register low scores which may be accounted for by their relative scarcity - even in the classroom.
- Q.9 On the children's use of equipment, 84% of respondents described the children's experience as 'enhanced' or 'greatly enhanced'. Some described it as 'restricted' but on following up this answer, it is because teachers saw the potential enrichment that was possible here for the children, but they were frustrated by the limited quantity of equipment available to such large numbers of children. A typical positive comment recorded was:  
"Now they can use it themselves, not watch the teachers do so".
- Q.10 Attempted to assess staff reactions to the architectural environment within which they worked. This question drew the most comment from teachers - mostly critical - but the bulk of the scores were on the 'satisfactory' end of the scale.

*why no money??*

Questionnaire E - Teaching Practices within the Open Space Unit

With Questionnaire E, what the teacher does with the facilities available is examined. What various teaching patterns are adapted?

Discussion of Relevant Points from Questionnaire E

Q.1&2 After settling into an (1) open space unit, it was found interaction and cooperation were high on the priority in teaching patterns. Also, use was being made of teaching across levels on a specialised subject - this was an increasing and developing trend.

Q.3 More than 20% of respondents made no preparation for entry into an open space unit.

Some teachers' responses were:

- a) "Observed teachers in experimental units in our school".
- b) "A few days teaching in open space unit at my school".

Less than 50% had attended conferences related to open space units and only 17% had had discussions with specialised staff.

Q.4 To this question, responses in the main were:

- a) "Lack of teacher aide".
- b) ".....interested in what other half of room were doing".

Main problems encountered by respondents were:

- a) Timetabling
- b) Noise level

Some respondents implied that though they had started with a "flexible" timetable, they now felt a rigid timetable is desirable for equipment, areas, teacher aides etc.

The use and content of timetables is still found to be a major problem.

Q.5 The majority of respondents stated their planning was such that changes could readily be made. Though respondents indicated a 74% usage of all change possibilities, less than 50% considered changing the way in which teachers are used thus, the questions about how teachers organise children or why teachers cannot 'organise' themselves or other teachers. The above may be referred back to the respondents quotation in Q.4.

"Start flexible....teacher aides etc."  
Another comment which reiterates the above  
".....groups' timetabling is so strict  
that it seems to destroy ideal".

Q.6&7 Only 51% of respondents worked with a greater than normal class size group for less than four hours a week and less than 66% for less than six hours per week.

Q.8 Results to this questionnaire imply there is no explanation why work within groups ranging from 10 to 20 is inferior to any other form of interaction. Interaction with the individual was stressed as most important.

Q.9 Results showed that children were placed by the teacher, where they (the teacher) are not talking, as often as possible.

Q.10 It was intended this questionnaire would generate discussion on teaching method, appropriate materials and facilities needed - this was not achieved as apparently the question forced the respondents into a frame of reference which was extremely uncomfortable for them.

- Q.11 94% of respondents answered 'yes' to this question.  
This is a difficult area in which to be precise and specific.
- Q.12 Only 65% of respondents made provision for children to pursue special interests and some responses indicated the use of a specific resource period, but with varying degrees of success - they also showed an awareness of the gap between theory and practice.
- Q.13 Too many answers to this question were general, but the implication was that very few teachers were able to nominate an activity in the school day which seemed to perform satisfactorily in an open space unit. This again implies an awareness stated above in Q.13.
- Q.14 The general indication of the respondents showed that there was a low involvement of student/teacher planning; this implies a contradiction of the principles of 'open space teaching', i.e. development of initiative, decision-making capacity, responsibility for self.  
One would have presumed more teachers were concerned with actively involved students.

Questionnaire F - The Open Space Unit and the Child

Taking all previous questions and responses into account, an attempt is now made to assess the effect all this has on the child who is in an open space unit.

- Q.1 No definite factor was given for selection of children for the open space units.  
 Though 86% of respondents nominated "appropriate grades" as the main selection criteria<sup>on</sup>, no-one could say what determined "appropriate".  
 It is quite significant that only one respondent nominated teachers' experience as the allocation basis.  
 What is the implication in  
 ".....Grades 5 and 6 were in an open space unit....  
 but Grade 7 was in a conventional classroom to normalise them for High School!"
- Q.2 Attempted to exploit Q.1 to a further degree but a negative result was achieved, i.e. of 17 responses, 15 different methods - some opposed.
- Q.3 The results show that movement of children from units is slight.  
 The possibilities of movement are available and are being used, whether by teachers' initiative or parents' request. Nowhere was there any suggestion that children were consulted prior to movement!
- Q.4 Responses to this question imply the rate of development of children has been accelerated in all aspects.
- Q.5 Many teachers answered by stating there was a movement towards greater self-direction on the part of the student, but there were still areas of decision-making which would always be in the teacher's province. The teacher still appears to be the major, if not sometimes total, focal point!

Q.6 This question basically states - open space teaching promotes children's decision-making: then asks - is this true?

24% of respondents did not reply, whereas the others presented such a wide range of interest and activity without any overall consensus of opinion - most answers were vague.

One may ask from this, to how and what is one committed, what should one work to?

Q.7 Can be answered by quoting some of the responses:

- 1) "Isolates tend to remain on outer, but have more avenues to escape hostility from others in group. Greater scope of movement tends to enable isolates either to gather together or change around in groups, thereby reducing sense of isolation and rejection".
- 2) "Too many opportunities for the isolates to withdraw and remove themselves from teacher's notice".

18.0 STAGE III - SUMMARY AND PROPOSALS

18.1 The first two stages of this thesis aimed to gather and coordinate basic data about characteristics of 'open space schools', the effects of varying space arrangements on student and teacher performance, perceptions and attitudes.

The intention of the third stage of the thesis is to develop guidelines and strategies that may assist in effective space utilisation from the knowledge compiled about the basic nature and characteristics of open space schools.

Open space schools appear to have been the 'educational phenomena' of the late sixties. Many educators and administrators have looked at the open plan addition and open plan school as an educational panacea. Trends and discussions with researchers in the field of education tend to imply that "if a small room is enlarged, children are better educated" and then proceed to agree that two open rooms are better than one, and so on ad infinitum.

The whole idea of the open plan school is to create space and flexibility at reasonable cost. Cost analyses (carried out by the Government) have proven that one does not get a greater teaching area for the same money. Costs are more than consumed by carpets and comfort controls, ~~such as~~ which are a necessity in large open space areas. Because it is possible to incorporate hall and corridor space into the teaching area - more space is achieved, but ancillary areas to this space are lost because of needs for <sup>①</sup> teaching planning rooms, <sup>②</sup> observation rooms and <sup>③</sup> tutorial or withdrawal rooms.

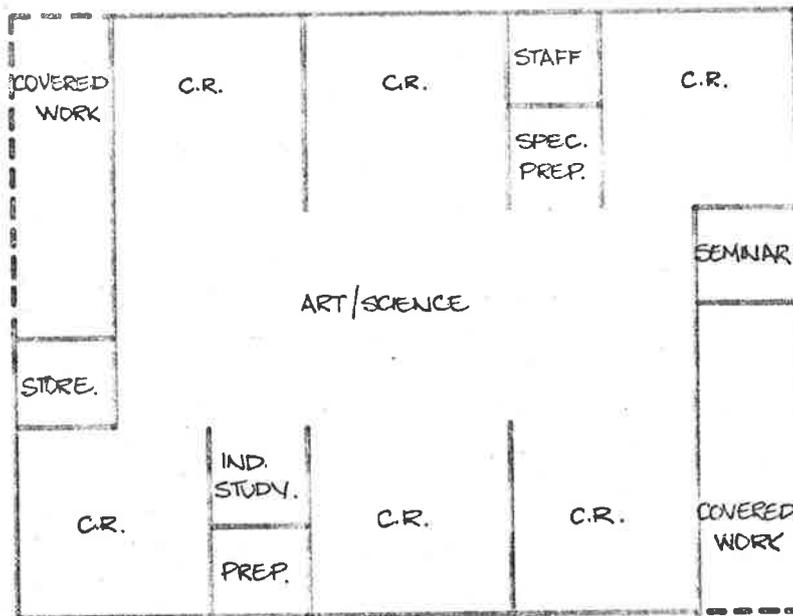
*(2+3 all needed, but not mandatory, in traditional schools too)*

Many of the aspects of present day school designs need to be evaluated and changes need to be made for flexibility - "Flexibility" - is there far less flexibility in open space schools than in 'egg crate' buildings?



BUILDING SIZE 173' x 35' 5"  
 " " 6140 SQ  
 BUILDING AREA PER PUPIL  
 TEACHING AREA 4260 F.S.  
 TEACHING AREA PER PUPIL  
 TEACHING PERCENTAGE OF TOTAL = 69% IN THIS WHICH IS  
 SOLELY A TEACHING UNIT WITH NO ADMINISTRATIVE LAVATORIES, ETC.,  
 I.E. THE BALANCE OF 31% IS CIRCULATION.  
 EXTERNAL WALLING TOTAL 417' = 1 FT. RUN OF WALL PER  
 14.65 F.S. OF FLOOR AREA.

PUPILS ACCOMMODATED  
 6 x 35 = 210  
 = 6140 ÷ 210 = 29.25 F.S.  
 = 4260 ÷ 210 = 20.25 F.S.



BUILDING SIZE = 100' x 70' TOTAL PUPILS = 210  
 " AREA = 7000 F.S. OF WHICH APPROXIMATELY 900 F.S. IS  
 COVERED AREA AT APPROXIMATELY  $\times \frac{1}{2}$  COST PER F.S. OF  
 REMAINDER OF BUILDING.  
 $\therefore$  COST AREA = 6550 F.S.  
 BUILDING AREA PER PUPIL = 6550 ÷ 210 = 31.2 F.S.  
 TEACHING AREA = 7050 F.S. = 31.2 F.S.  
 TEACHING PERCENTAGE OF TOTAL AREA = 100% CIRCULATION IS  
 ELIMINATED.

EXTERNAL WALLING TOTAL 340' = 1 FT. RUN OF WALL PER  
 19.3 F.S. OF FLOOR AREA.

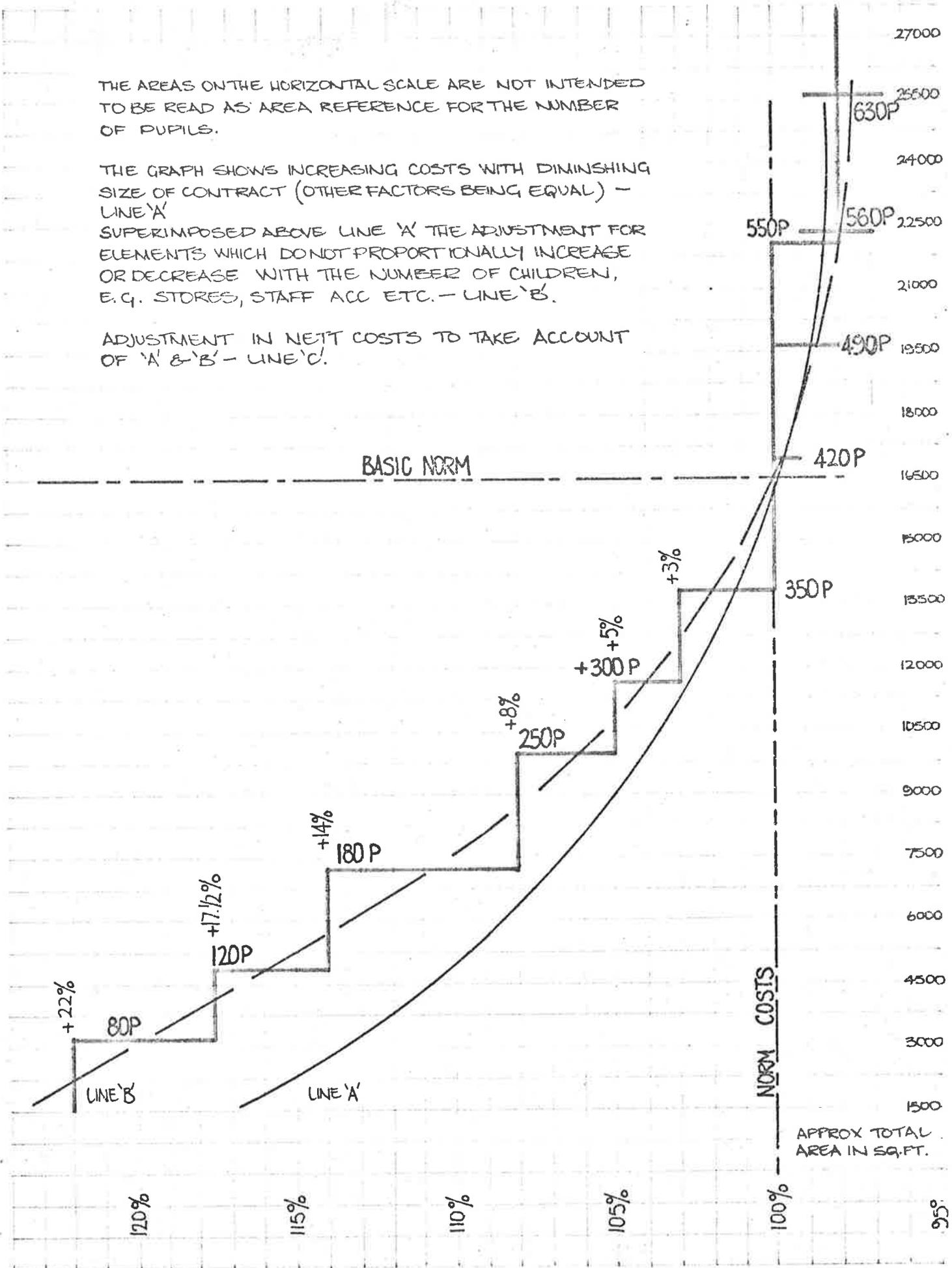
SHOWING EFFECT OF PLAN FORM ON COST BY FACTORS SUCH AS  
 EXTERNAL WALLING RATIO AND INCREASED EFFICIENCY OF SPACE  
 UTILISATION.

THE COST OF THE TWO UNITS IS UNLIKELY TO BE GREATLY DIFFERENT.  
 EFFECT OF PLAN FORM.

THE AREAS ON THE HORIZONTAL SCALE ARE NOT INTENDED TO BE READ AS AREA REFERENCE FOR THE NUMBER OF PUPILS.

THE GRAPH SHOWS INCREASING COSTS WITH DIMINISHING SIZE OF CONTRACT (OTHER FACTORS BEING EQUAL) - LINE 'A'  
 SUPERIMPOSED ABOVE LINE 'A' THE ADJUSTMENT FOR ELEMENTS WHICH DO NOT PROPORTIONALLY INCREASE OR DECREASE WITH THE NUMBER OF CHILDREN, E.G. STORES, STAFF ACC ETC. - LINE 'B'.

ADJUSTMENT IN NETT COSTS TO TAKE ACCOUNT OF 'A' & 'B' - LINE 'C'.



In a characteristically traditional classroom one can close doors and windows to outside intrusions. How does one exclude unwanted diversions in an open area.

On close personal observations of practice in open space areas over periods of three days, pupils have been seen working in corridors, library or any other nook, cranny, office or room that is available, as well as the classroom.

The same can be done in the open plan school, but there are fewer nooks, no crannies and far more diversions. If closed traditional classrooms are poor learning environments for some children, it may be conversely held that open, free situations are detrimental to other children. Many children cannot work in the open, the din and stimuli input of the new type of operation. Children constantly search for that quiet corner, so they can keep their sanity. It has always been held that a child studies and learns best when he is free from external distractions.

Many now say that it doesn't matter, that children learn to shut out noise. Observations show children supervised tend to do a tremendous amount of wandering unless the teacher outlines a programme that is well-organised and planned and communicates that organisation and planning to the children, but too often, teachers and pupils tend to opt out. It is excused by terms such as "the need to grow", "to develop responsibility", "to create awareness of the world around" and "to build social interaction". Teachers can group pupils and exchange classes more easily in the open setting - at what level should this be done?

What children should be placed in open plan schools? If one looks at children, has any idea of the world around him and has delved into the rudiments of the psychology of the growing child, a certain clarity of thought should result.

Not to noise of partial distraction unless windows are painted over!  
The number depends on the teacher, since they can be created.

Have you done any comparative measurements in surveys??

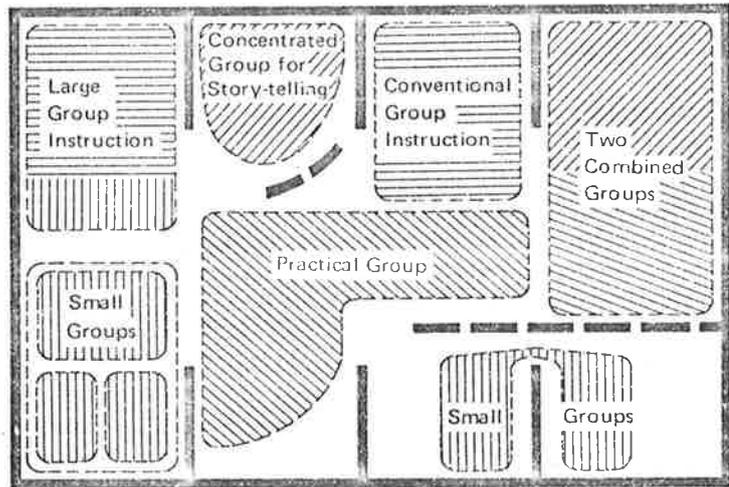
What are all these assertions based on? They don't come out of your questionnaires, or reports of other studies.

How often? What is this generalisation based on?

Observations have led to the belief that primary children and seniors of high schools should be in an open plan school. The small child who enters school has the need for visual and auditory privacy i.e. the student needs landmarks, reference points, territorial markers - they must know where to go or where they belong (i.e. homebase and class teacher). There is a need more for the "Nook and Cranny" type of situation - the definition of subspaces; rather than huge "Barn Type" seas of undifferentiated space.

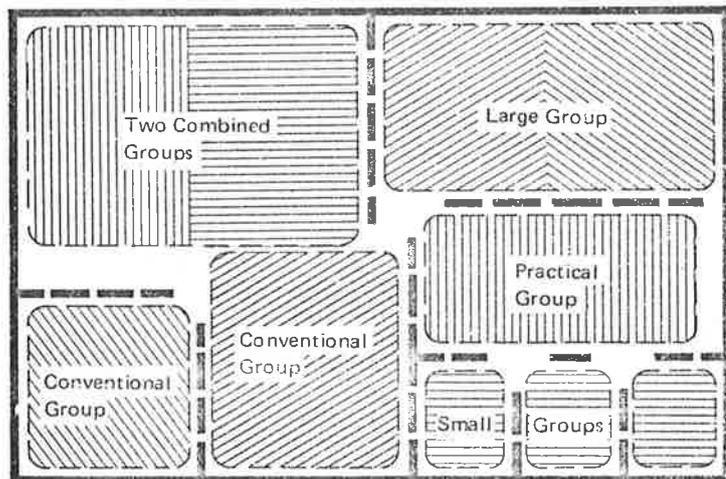
*Nook and Cranny type*

Fixed divisions combined with mobile



*Barn type*

Mobile divisions throughout



18.2 The solution to the problems posed by residual practices of the traditional mode in South Australia has been the open-space unit. The open-space unit has been built to make the requirements of the child-centred mode more easily possible and, in particular, to get rid of those residual aspects of the traditional mode which have proved inhibiting. One can thus expect that, in particular, the unit will make it more easily possible to:

- a) Cater for individual difference among children.
- b) Develop initiative, zest, self-reliance in children.
- c) Develop professional interchange and maximise the use of special teacher talent.

Because the unit has been built to allow teachers to deal more adequately with the exigencies of the child-centred mode, does not mean that this is all it can be used for. One could go so far as to say that any kind of teaching style would find a reasonably secure home in an open-space unit. But, just as a hammer is probably better used to knock in nails than to stir porridge, because it was designed for that function, so really the open-space unit is better used for a child-centred cooperative style of teaching than for a traditional mode. But the hammer can be used to stir porridge, certainly.

Once this notion has been allowed, we can strip the open-space unit of more than a little of its mystique. Regard it as a teaching aid - as a physical aid which makes it more easily possible for teachers to achieve particular objectives. One can bend to one's will, to a certain extent. But eventually, also, it will have an effect on teaching behaviour.

Perhaps one can make the point more clearly by actually considering a more usual teaching aid - a strip-film projector. Notice the following:

- 1) One can use it with small groups, or a large group.
- 2) One can change the kinds of materials one puts through it.
- 3) One can use it in a darkened room or in a corner, or with a rear view screen.
- 4) One can show, or children can show it.

And so forth. It can exhibit a considerable degree of flexibility. But note, that if one is committed to using it regularly, then it will tend to cause a change in teaching behaviour. For instance, talk less. One may find they are structuring their social studies topics around what strip films are available. One finds that they start to know more about other audio-visual aids. In short, regular use of this aid, the strip-film projector, will affect teaching behaviour.

Similarly with the open-space unit.

Although one may regard it as a giant teaching aid and bend it to their purposes in a whole host of ways, it will start to affect their teaching behaviour in a way which will lead to a more child-centred mode. It will be more useful to adapt consciously and in a planned manner, than to allow oneself to be adapted. To do this will be to avoid a considerable number of frustrations. To assist in conscious adaptation, it might be useful to list some of the assumptions which appear to be underlying the open-space unit.

- a) With respect to teachers, the following appear to be the assumptions:
  - \* That teachers can work and plan together as a team.
  - \* That teachers working in a team is a good thing.

- \* That teachers working in a team <sup>are</sup> ~~is~~ more effective than teachers working singularly.
- \* That teachers will find time to plan together.

b) With respect to children, the following appear to be assumptions:

- \* That children ought to display self-reliance and initiative.
- \* That children ought to be free to move about.
- \* That children ought to talk and work with other children.
- \* That children will profit by experiencing a wider range than usual of adult personalities and child classroom contacts.
- \* That children ought to be treated as individuals.

c) With respect to curriculum and organisation, the following appear to be assumptions:

- \* That subjects are artificial and that learning ought to take place around integrative topics.
- \* That rigid timetable divisions are to be avoided.
- \* That grades are too rigid and ignore the wide differences among children.

There are certainly other assumptions, but these appear to be the major ones. The point to make is the one already made; that whether one accepts these assumptions is up to the individual - they are neither 'wrong' nor 'right'. They are statements which cannot be proved in any real sense. They are prescriptions, statements giving advice and whether one chooses to accept the advice or not is a function of whether one finds themselves right or left of centre of the continuum.

*these are statements of value*

*or a government!*

However, as already pointed out, the teaching aid called the open-space unit is based on these and other assumptions; and further, that one will find oneself influenced by it to some extent. Whether one will be willingly or unwillingly influenced is again a result of where the individual stands along the continuum. Let us quickly review this:

1. Two extreme positions were stated in operating as a teacher - the traditional mode - the child-centred mode.
2. It was stated that neither position was 'right' or 'better', but that people agreed or disagreed.
3. It was shown how the trend since 1870 is for the teaching mode to have become more child-centred.
4. In doing so, it has brought along with it a number of residual practices from the traditional mode.
5. These included:
  - \* One teacher per group
  - \* One group per room
  - \* One room designed on the assumption that the class was quiet
  - \* Insufficient aids
6. To make it possible for the child-centred mode to become more operative, the open-space unit has been designed.
7. The open-space unit does not have to be used in a child-centred way. It is an aid to be used as teachers see fit.
8. It will tend, however, to influence people's teaching behaviour towards a child-centred mode.
9. In particular, it will do this because it has certain assumptions built into it.
10. Because of all these things, it seems useful to suggest a list of minimum objectives for teachers in the open-space unit:
  - a) To cater for individual differences among children in at least one area.
  - b) To develop in children a zest for learning.

- c) To develop in children adaptability, initiative and self-reliance.
- d) To integrate and correlate aspects of the work where possible.
- e) To have children working in groups.
- f) To work cooperatively with a teaching colleague.

18.3 The Best Money one can Spend is on Planning

First comes the educational programme for now and future  
Before any effective planning of a new school building can be launched, it is necessary to establish the structure of the educational programme itself, keeping in mind that a school being designed today must also serve tomorrow's needs.

Two vital questions then, would seem to be:

What will be required in future schools?

In what ways will our future schools differ from existing ones?

The focal point of any school design is the teaching area - the key to the whole complex problem of efficient, functional design to support the educational process.

What are some of these changes affecting teaching areas?

- \* The greater use of educational television and the requirements of viewing by groups of varying sizes emphasises the need for different types and shapes of teaching areas with more mobile types of furniture.
- \* Viewing angles, both vertical and horizontal, viewing distances, light control, acoustic control and ventilation must be considered.
- \* New shapes of learning areas may enable the architect to eliminate much of the present corridor space, thereby reducing building and maintenance costs.

- \* Use of television and projector-type equipment indicates a reduction in the amount of window space required in teaching areas.
- \* Cooperative or team-teaching means changes in layout of teaching areas and their furnishings, e.g. an increase in such learning resources as overhead projectors, radio, tape recorders, teaching machines etc.
- \* Teaching spaces should be designed so that several spaces can be opened up to form one large space for large groups. Within a single teaching space it must be possible to arrange a regular class into several small groups, under the supervision of one teacher.
- \* Because new teaching methods require movement not only between teaching areas, but within teaching areas, carpet is suggested to reduce undesirable noise. Use of noise-retardant folding partitions, airwalls and similar devices provides freedom of movement and choices of arrangement of spaces.
- \* *In Primary Schools*  
A Teacher specialisation will increase and this will probably mean the provision of either:
  - a) Special subject teaching areas, or
  - b) Special subject facilities contained within a general teaching area.
- \* Newer teaching methods usually demand considerable preparation so that it is now essential to provide teacher workrooms, adjacent to the teaching areas and so arranged as to have visual control of the teaching areas.

Inclusion of covered play space (or preferably shelter rooms) in the school plan is a desirable feature. These can function as play areas during wet weather, as auxiliary physical education stations and as auxiliary teaching areas for large-group presentation.

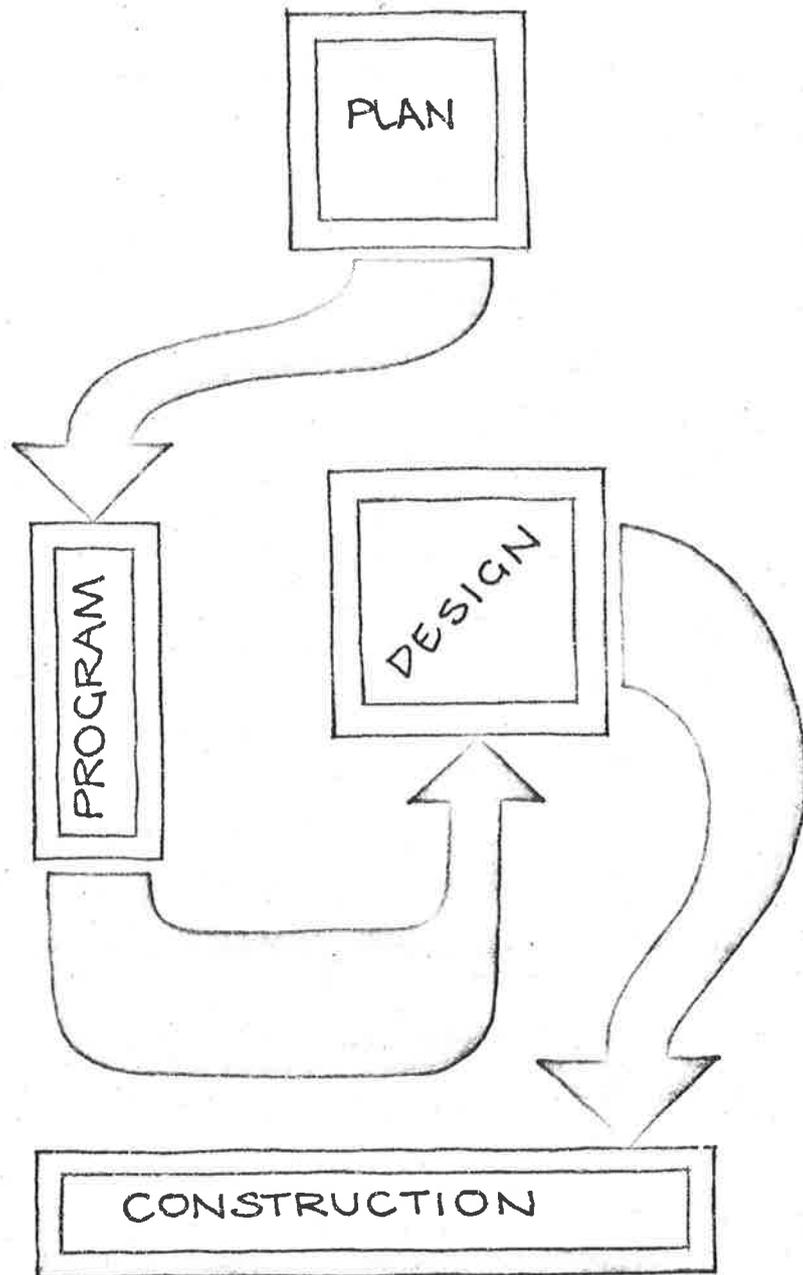
- \* Serious consideration should be given to types of plans other than the conventional and to encouraging architects to produce a design which not only occupies less land, but which is also more efficient from the educator viewpoint.
  
- \* A compact plan has advantages over an elongated plan because:
  - a) It is cheaper to build.
  - b) It is more efficient from the education standpoint and more effectively disciplined.
  - c) It occupies less land, thereby leaving a larger playground area.
  - d) It is easier and cheaper to maintain and service.
  - e) It facilitates easier communication between spaces.

The well-designed school must serve the needs of the education programme from the point of view of students, teachers and administrators. The educational specifications must come first if the structure is to serve the function. The answers can only come after school planners have determined the most basic patterns of their educational programme.

The greatest economy any planning group can anticipate is the economy which comes from the efficient use of space and facilities.

Cheapness should never be confused with economy.

# PLANNING / PROCEDURES



19.0 THE FORMATION OF THE SCHOOL'S ENVIRONMENT

The following diagrams and plans were designed not for any specific school or community, but as a stimulus to open up the options in school design.

THE SCHOOL'S OBJECTIVES  
SHOULD DETERMINE

THE FORMATION OF THE  
SCHOOL'S ENVIRONMENT

An effort has been made so that school design is not definitive, but a continual changing school for an era<sup>w</sup> which education is facing continual new demands and having to live with new techniques and new tools.

The diagrams and plans attempt to acknowledge some permanent human values in scale and groupings while also avoiding the fixed opinion which says that teaching should be done this way or that forever in the future.

A NEW WORKING METHOD creates

NEW LEARNING MATERIALS  
NEW DEMANDS ON THE  
ENVIRONMENT

If schools are to be based on the above philosophies, the logical place to start is at the beginning - the Infant School.

20.0 THE INFANT SCHOOL

In the majority of cases in South Australia, the Infant School is an adjunct to the Primary School.

The present trend is to create a self-sufficient environment for the Infant School within the total Infant/Primary School complex so that if the need arises there can be a common use of facilities, thus avoiding ~~duplication~~. *duplication*

*sic!*

The school illustrated here is a small school which may be developed up to any of the bigger school's needs.

The drawing attempts to relate the school's main spaces for teaching purposes.

The school is basically split into two areas:

Area A is for the younger children, i.e. the least mature. Here, the concentration of educational tools is on toys, puzzles, blocks, an area for playing games, space for arts and crafts, singing and dancing.

Area B concentrates on the more mature students of the group, i.e. more sophisticated options are offered, many based on learning to read - thus there are more books in this area - picture books and others - displays of small animals, plant life, scientific phenomena. In Area B simple audio-visual devices should be introduced to the pupils.

Between Area A and B is the:

Activity Room where the young pupils can view slide shows, present a play of their own or have dancing or gymnasium classes.

*Why is this smaller than the Withdrawal Room on the plan?*

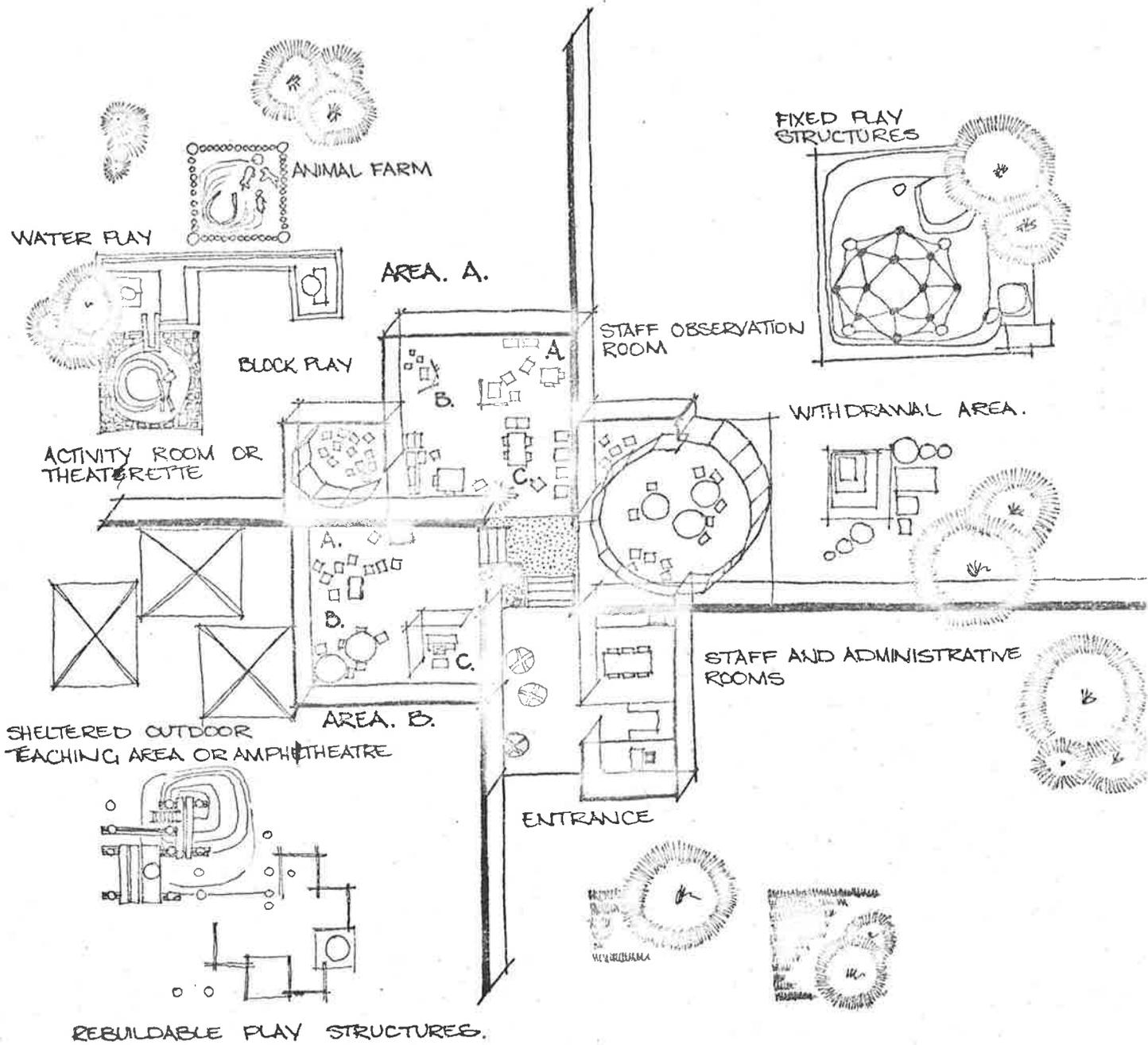
If the Activity area is made large enough, it may also be used as an indoor assembly area for the infant school.

AREA. A.

- A. HOUSE KEEPING.
- B. MANIPULATIVE TOYS.
- C. ARTS/CRAFTS.

AREA. B.

- A. PRESENTATION.
- B. SCIENCE PROJECTS.
- C. STUDY AND TUTORING.



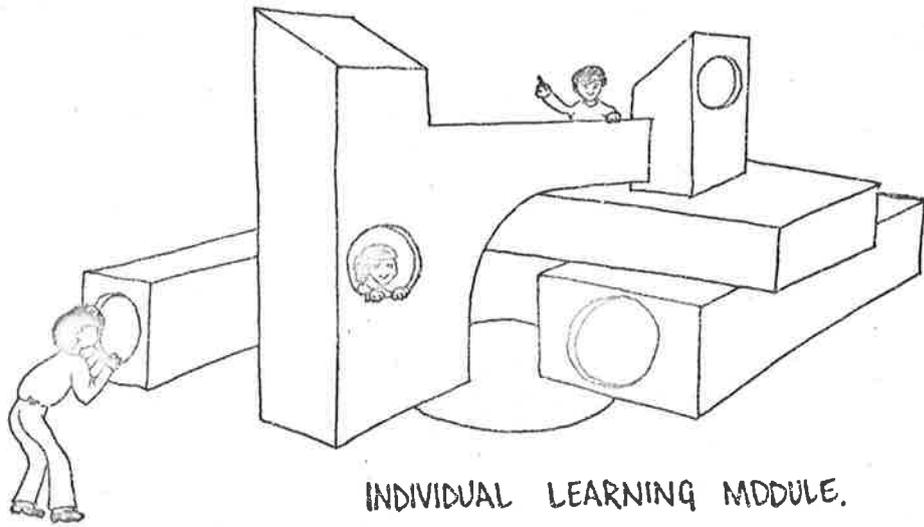
Withdrawal Room where individual or small group instruction can take place in an "enclosed from disturbance" area. Around the indoor teaching areas are the outdoor related area.

i.e. Next to Area A, a playground to cater for the younger children, large sandpit, an animal enclosure with a variety of animals that children can learn to take care of.

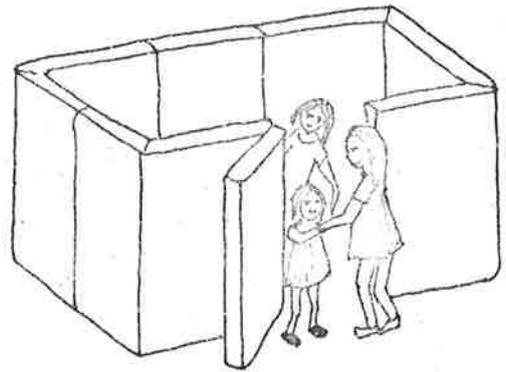
Around Area B the outdoor area offers more complex doings - rebuildable play structures, the sheltered outdoor teaching areas.

Refer to diagram and photos of recently constructed infant schools designed by the author of this thesis:

- i) O'Sullivan's Beach Infant School  
(completed late 1975)
- ii) Goodwood Infant/Primary School  
(ready for occupation January 1976)

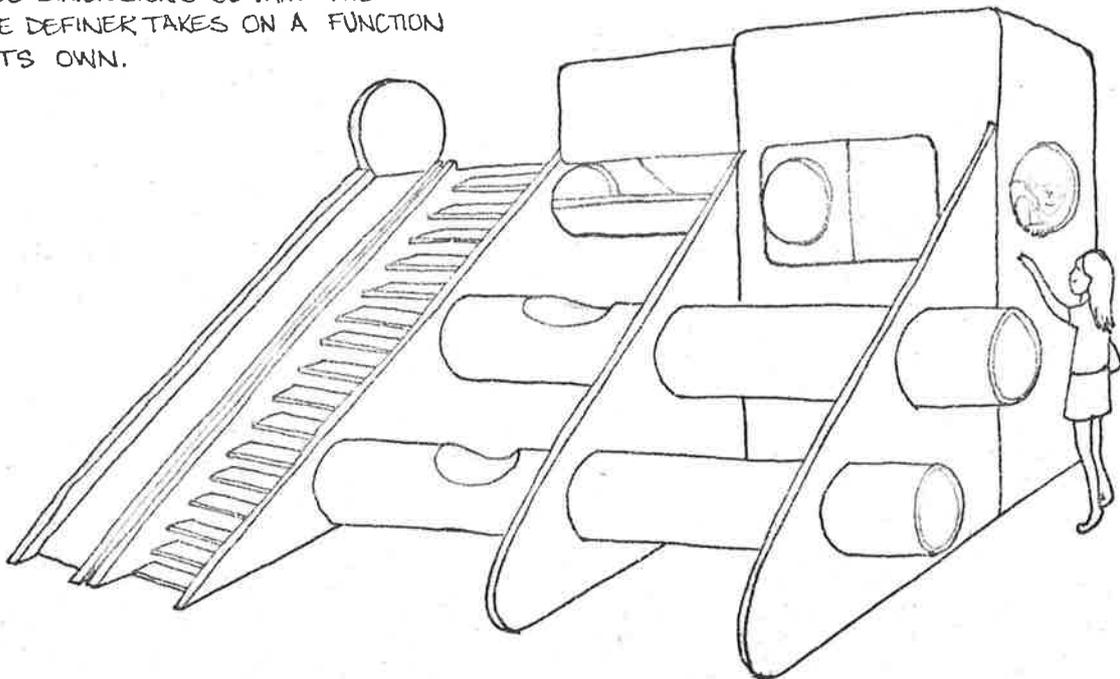


INDIVIDUAL LEARNING MODULE.

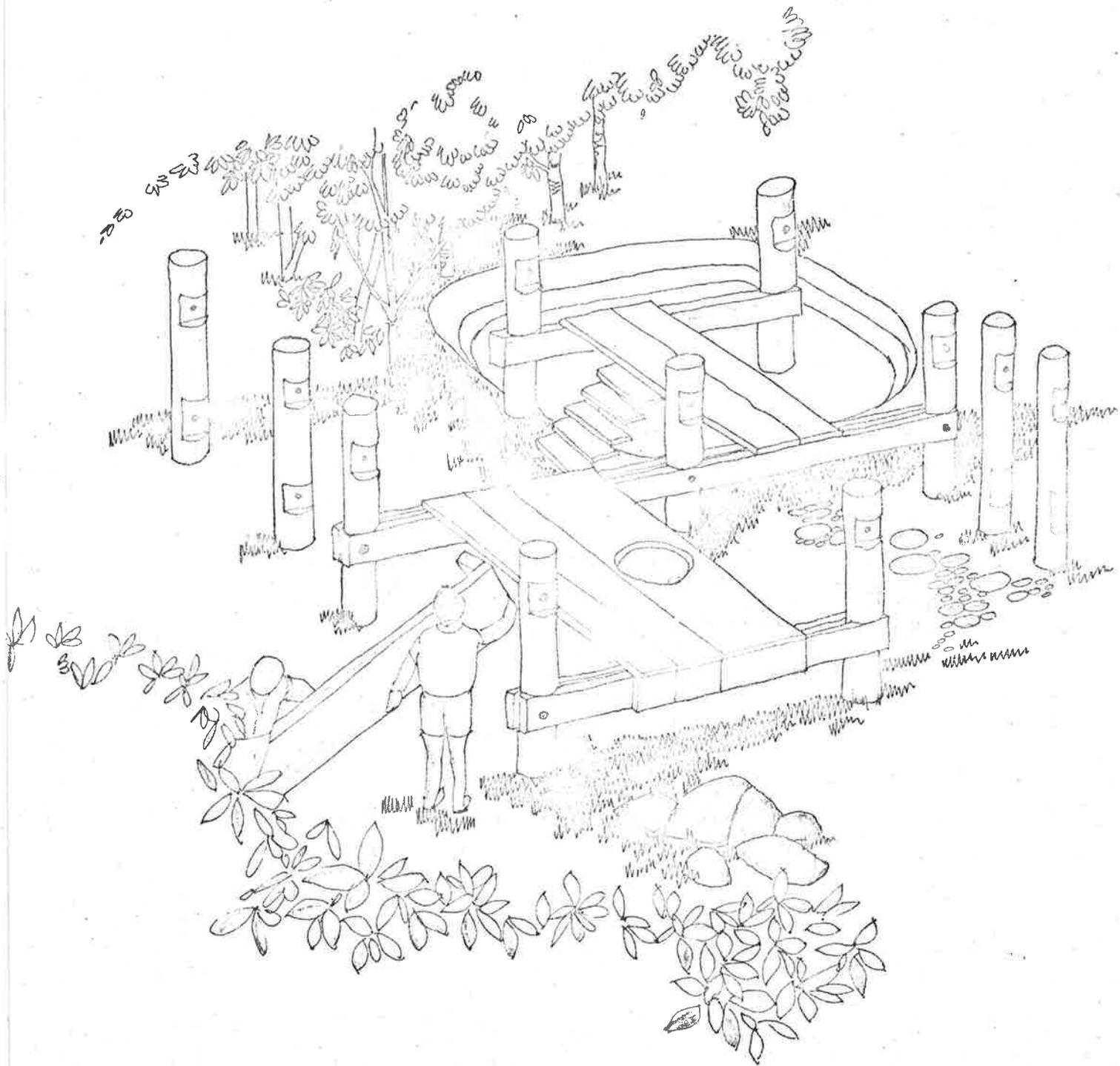


PHYSICAL ACTIVITY UNITS.

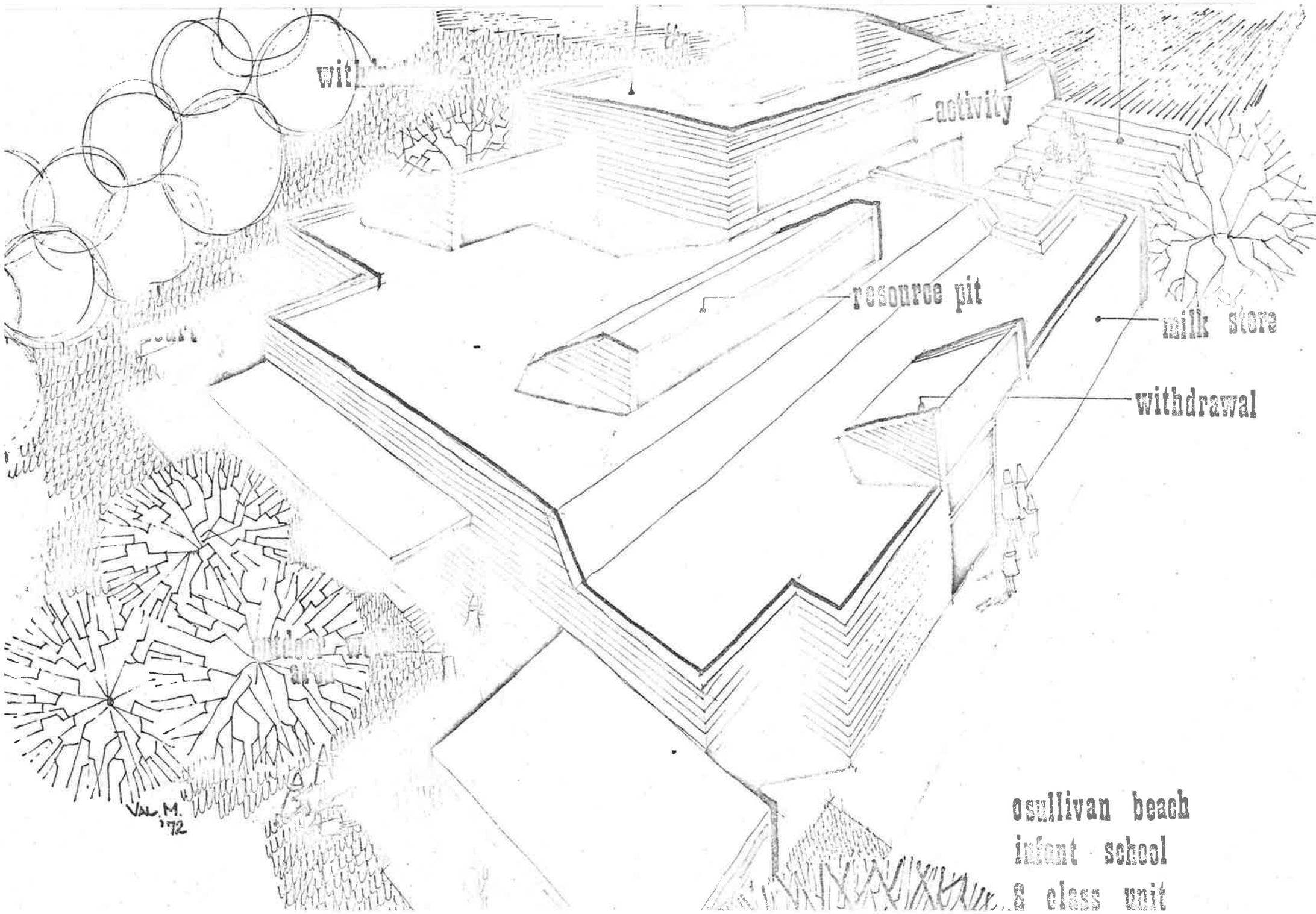
UNITS LIKE THESE DEFINE SPACE IN THREE DIMENSIONS SO THAT THE SPACE DEFINER TAKES ON A FUNCTION OF ITS OWN.



ACTIVITY STRUCTURE.



ADVENTURE PLAYGROUND.



wit

activity

resource pit

milk store

withdrawal

VAL M.  
1972

sullivan beach  
infant school  
& class unit

21.0 THE PRIMARY SCHOOL

Using the previously discussed examples of 2, 4 and six teacher units as a basis - then expanding these, the following scheme is evolved providing a range of spatial environments to suit various purposes.

THE ENVIRONMENT MUST BE DESIGNED BY THE FUNCTIONS AND THE SOCIAL ATMOSPHERE

ANALYSES OF ACTIVITIES MUST BE THE BASIS OF MODELS FOR THE NEW SCHOOL

With the above in mind, the schematic plan attempts to incorporate the following themes:

- a) Flexibility of classroom setting, i.e. use of space/room dividers allowing teachers to organise instruction in any way they wish, providing them with the ability to select or manipulate a corresponding appropriate setting - from the conventional self-contained classroom situation to fluid immediate variable arrangements.
- b) Diversity in scale of space available, i.e. the use of the relevant architectural environment for the appropriate activity,  
 e.g. high ceilings for large groups or vigorous action (such as may occur in an activity room).  
 Small intimate, low ceiling areas such as alcoves for individual study or Autorial work.  
 The design of the school on the following pages attempts to incorporate the above by allowing for a change of pace within any teaching area.
- c) Accessibility/Availability to means of instruction, i.e. the ability for students and teachers to have access to the resources they may need at any particular time,  
 e.g. from a child's access to a teacher, to the teacher's ability to call upon any audio-visual aid she may require.

Schematic Design Proposal (refer following diagrams)

Refer p.43 description of proposed open plan school for Keller Road (S.A.) where basically three groups of "six teacher" open plan units are grouped around a central resource centre and activity room.

In the following plan for a primary school, there are four groups of classrooms clustered around a central library (resources centre) core. The central area should be high ceiling.

Between the resource centre and teaching areas are the teachers stations/work areas.

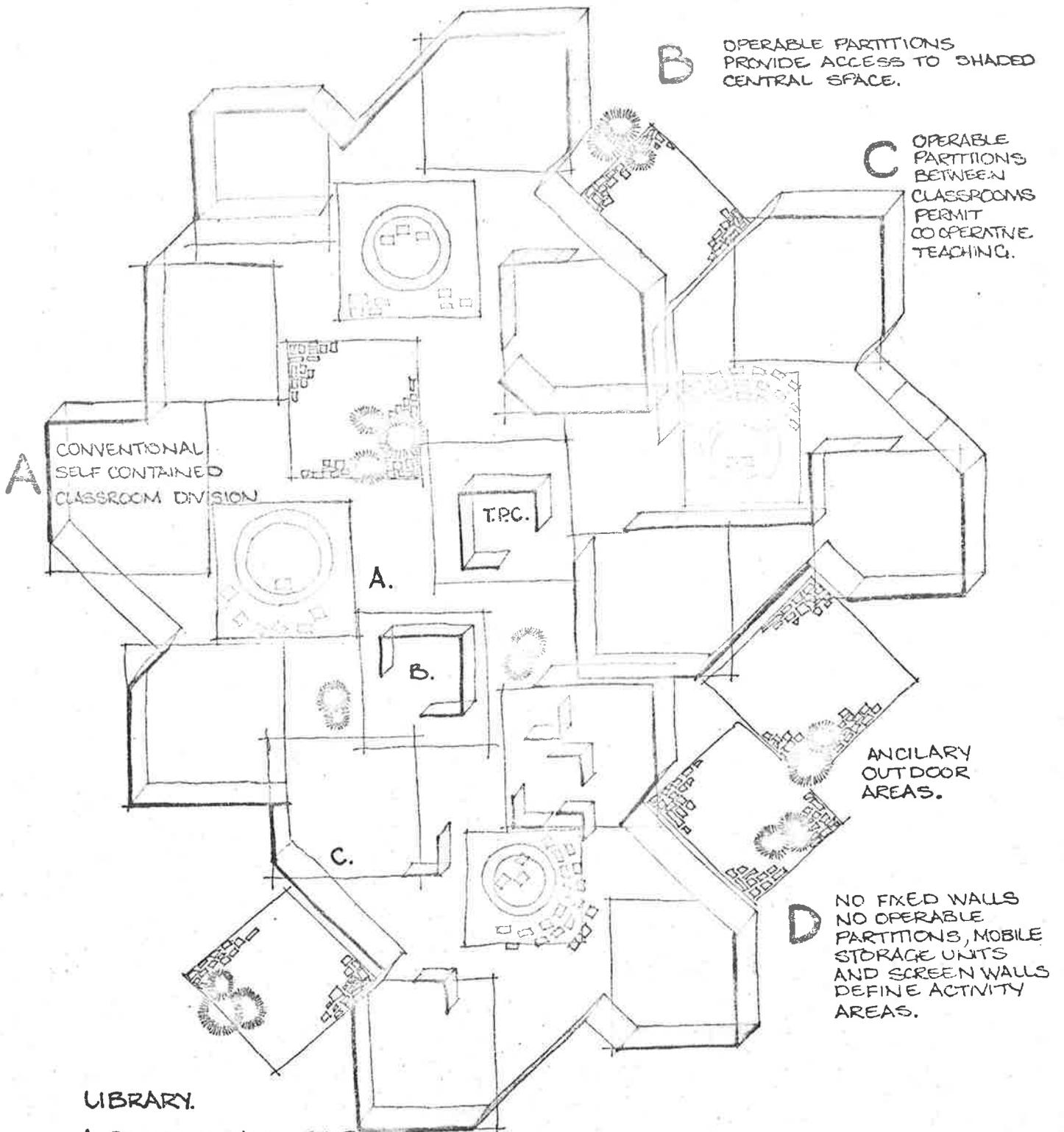
As an adjunct to each teaching area are small - intimately scaled alcoves for individual or tutorial use - for space within which the individual can relate, can feel safe and secure is an essential concomitant of the architectural design.

"Everything must be formed so that one can make it relevant to himself according to his own nature, with adequate implications for others"

The plan shows a transition from the characteristic traditional self-contained classroom to a cluster of classrooms almost totally devoid of fixed internal division walls.

This is done so that with this kind of flexible design the school itself could make the transitions from a completely conventional arrangement with all four groups in self-contained groups as in Group A to a totally open plan with all groups as open and adaptable as Group D.

Group A - the four classrooms are set for conventional teaching with a central common activity pit area. Each of the above classrooms are enclosed within their own four walls.



A CONVENTIONAL SELF CONTAINED CLASSROOM DIVISION

B OPERABLE PARTITIONS PROVIDE ACCESS TO SHADED CENTRAL SPACE.

C OPERABLE PARTITIONS BETWEEN CLASSROOMS PERMIT CO OPERATIVE TEACHING.

T.P.C.

ANCILARY OUTDOOR AREAS.

D NO FIXED WALLS NO OPERABLE PARTITIONS, MOBILE STORAGE UNITS AND SCREEN WALLS DEFINE ACTIVITY AREAS.

**LIBRARY.**

- A. PROJECTS AND EXERCISE.
- B. BOOKS AND MATERIALS.
- C. VIEWING AND LISTENING.
- T.P.C. TEACHER PLANNING CENTRE.

Group B - Operable partitions replace the division walls of Group A, thus allowing overflow into the central pit area or any other teaching area as may be required.

Group C - is a further improvement on Group B by having a more fluid arrangement of movable partitions creating a more cooperative organisation for teaching.

A student can transfer more readily from one group to another dependent upon his own individual progress, or his academic or social needs.

Areas can be large or small depending on whether a lecture or demonstration is to be given or small enclosed spaces for groups of students working on individual projects.

Group D - shows the ultimate in fluidity and flexibility - the total space is thrown open - this allows for easy interchange of teachers, pupils and resources.

Light, visual screens - improvise small spaces as needed to contain or screen activities.

Acoustics in the above areas are provided by use of carpeting and shape and texture of ceiling planes. Each group (A,B,C,D) is directly related to outdoor teaching and activity areas.

A general description of the above plan could be presented thus - a variety of spatial solutions ranging from black to white and including a whole series of greys (fluid space).

Teaching Area Group D presumes an advanced degree of cooperation and joint planning, teaching becomes a total team activity, thus teachers stations/work areas become an important hub of the school,

e.g. used for conferring with team members, meeting with other teams, developing instructional materials and conferring with parents.

22.0 THE SECONDARY SCHOOL

The majority of the new open plan secondary schools in South Australia have been planned in the light of the Secondary Division Building Report 1969 which is basically still valid now in 1976.

It is generally agreed that today's teenagers mature earlier than their parents did, they appear to be ready for more concentrated and richer experiences than most present day traditional systems can provide.

The following plans attempt to present an environment designed to meet the diverse needs and capacities of today's secondary school students.

A COORDINATED CURRICULUM GIVES THE PUPILS  
A CONCEPT OF WHOLENESS

Thus, there must be a change of pace and sophistication from the Primary School.

Because of the basic curriculum of Secondary Schools, they must be comprehensive in the sense they will introduce the pupil to departmentalisation (tracks). Not only is the arrangement of the buildings and the internal planning of the teaching areas different, but the use of open space requires new teaching and organisational approaches.

Obviously, with the introduction of wide changes in curricula, all involved in planning and using the new schools must develop the utmost flexibility in their attitude and approach.

Departmentalisation is achieved by grouping together the facilities for related disciplines, in large, open plan teaching areas.

Central to these open plan teaching areas is the Resource Block (Library) - this would probably be the largest building in the school.

The learning-resource block should not only provide carrels and storage space, but should also house a senior student centre (for relaxed discussion, gatherings,

# CENTRAL ADMINISTRATION BLOCK.

SCIENCE / MATH.

CAREER SKILLS

**LIBRARY**

- A. ELECTRONIC RESOURCES.
- B. LIBRARY CONTROL CENTRE
- C. READING RESOURCES.
- D. DISPLAY TERRACE.
- E. SPECIAL STUDIES FORUM.

TEACHER  
PLANNING  
CENTRE.

**LIBRARY**

- A.
- B.
- C.
- D.
- E.

2ND YEAR BLOCK

3RD YEAR BLOCK

- A. ADMIN AND GUIDANCE.

1ST YEAR BLOCK

- A. HOUSE COMMONS.
- B. ENGLISH.
- C. FOREIGN LANGUAGE.
- D. ADMINISTRATION AND GUIDANCE.
- E. SOCIAL STUDIES.

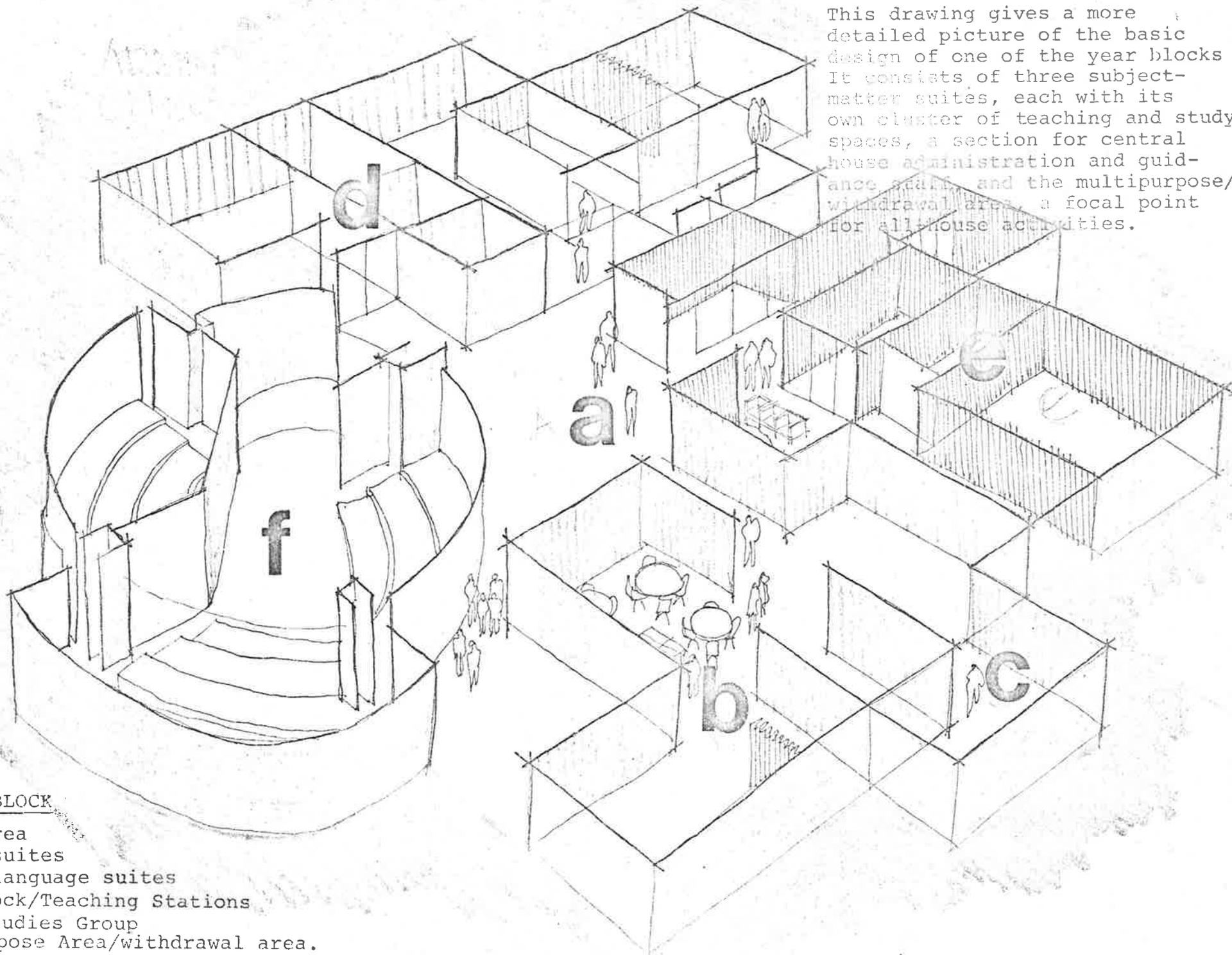
4TH YEAR BLOCK

- A. CENTRAL SCHOOL ADMINISTRATION.

A.



This drawing gives a more detailed picture of the basic design of one of the year blocks. It consists of three subject-matter suites, each with its own cluster of teaching and study spaces, a section for central house administration and guidance staff, and the multipurpose/withdrawal area, a focal point for all-house activities.



TYPICAL YEAR BLOCK

- a. Common area
- b. English suites
- c. Foreign language suites
- d. Admin Block/Teaching Stations
- e. Social Studies Group
- f. Multi-purpose Area/withdrawal area.

RESOURCE BLOCK - LIBRARY





LIBRARY

A/V - electronic resources

general free space), it should be there for all, so *(that)* as the student's powers and confidence increase, he makes greater use of the learning block and its varied resources.

As with other buildings in the plan, ready access is provided to adjacent outdoor study areas.

Access to the library-resource centre should be available from all sides to allow easy relationship between the various open plan teaching subject departments.

Thought should be given to providing in the design for "out of school" hours use of the complex for open-access borrowing of different materials.

The Art/Craft Block should provide for industrial art, creative art and domestic arts.

Basic open space planning has been enjoyed in craft workshops for years - due to the nature of the curricula, now, the grouping of all art/craft facilities in one large open area with a minimum of dividing walls gives advantages of ready access to a much wider range of equipment and materials.

The plan shows one area flowing into the next, a central workspace for the teachers.

Areas for noise source (power tools, sawing, hammering) are set apart by themselves.

An effort has been made not to split the vocational from the manual arts, also boy and girl craft has been brought together for one and all.

The Science/Mathematics Block

The plan shows laboratory spaces (3) clustered around a central store and preparation room and advanced workspace.

Seminar/Withdrawal rooms are placed around the perimeter of the teaching area along with the various storage rooms.

THE ART/CRAFT BLOCK  
Domestic arts



THE ART/CRAFT BLOCK





ART CRAFT  
Creative art

The laboratories (by the use of movable tables instead of fixed benches) can be used for science or mathematics. The use of overhead services increases the flexibility of the area and increases the total floor space available.

The small spaces abutting the laboratories are for students working on advanced, long range projects and various other concentrated student works.

One of the laboratories could be deleted (depending on the needs) and replaced by a tiered demonstration room for a large group of students where team-teaching and lecture tutorial methods would take place, thus allowance is made for more conventional separation of lecture and laboratory work.

#### The English/Languages/Social Studies Block

This basic plan consists of three suites (for each of the subject matters) and each suite has its own ancillary teaching and study spaces.

The three suites all surround a central lecture/teaching space which is common to all.

There would be a minimum of special equipment in this block due to the nature of the subject matter.

Provision is made for live or televised instruction.

An area is provided for administrative or specialised guidance which may be required by any student at any time.

Each separate suite consists mainly of instructional space and space for teacher preparation.

The area planning is such that it can cater for seminars, individual study or work on projects and for lectures and/or demonstrations.

By use of varying types of room dividers/partitions several kinds of teaching areas may be created:

- 1) Permanent Partitions - physical integrity to each individual suite as a whole.
- 2) Relocatable Partitions - to meet changing programme needs.



THE ENGLISH/LANGUAGES/SOCIAL STUDIES BLOCK  
----- and each suite has its own ancillary teaching and  
study spaces.

THE LABORATORIES - by the use of movable tables instead of fixed benches can be used for science or mathematics. The use of overhead services increases the flexibility of the area and increases the total floor space available.



- 3) Folding Partitions - instant room transformation.
- 4) Half Height Visual Screens - provide (short term) visual privacy without permanence.

#### The Music Suite

The plan makes provision for a wide variety of activities and groups of different size - it allows for music making as well as musical appreciation and theory.

#### Shorthand/Typing Suite (Commercial)

A separate room (which could be ancillary to the Art/Craft block) for teaching the skills of shorthand and typing by the latest audio-visual and electronic techniques can take place.

If Art/Craft, Shorthand, Typing, Business Education are brought together a career skills block could be created as shown on the adjoining pages. These are still treated as separate and distinct in most secondary schools today. This area provides space and equipment for all of the fine and applied arts as well as the arts of homemaking.

The plan is based on the premise that making useful objects and acquiring the skills and understanding which help to create the human environment are fundamental to everyone's education.

The plan for the career skills department beginning in the upper corner are three business-education rooms. Here the students learn how a business is run and managed, how new products are conceived and introduced. A separate room is equipped for teaching the skills of shorthand and typing as useful for students who go on to college as well as those who don't. Together, this whole section serves as a laboratory to prepare students to work in enterprises of all kinds.



THE MUSIC SUITE

Provides for a wide variety of activities and groups of different size - it allows for music making as well as musical appreciation and theory.

\_\_\_ Music making



MUSIC SUITE  
Musical appreciation and theory.

The design laboratory moves the student into the planning of a new product, a work of art, or some special project of his own. All the skills of design - from silk screening to drafting, from advertising layout to using a computer to designing a dress pattern - would be taught here in a flexible, open space adaptable to many purposes. Integrally related is the production laboratory for printing, ceramics and sculpture. A basic and flexible shop is adjacent to serve them all.

Finally, a home management laboratory houses instruction in the art and skills of homemaking - not exclusively for girls, but for boys as well who want to learn to cook, to manage consumer expenditures better, perhaps even to learn a thing or two about the role of the late 20th Century husband and father.

The Physical Education, Drama Auditorium Building

This multi-purpose area could be used for noontime meetings or, by modulating lighting, for a social event such as a pop concert or cabaret.

Refer to drawings and sub-notes for varying arrangements and uses of the building.

The above form of building will provide more scope for the imaginative teacher and increase the range of activities offered to students.

In the schematic plan each individual group/cluster of teaching spaces has provision for an administration area; in common with this is a central administration block so that it can fulfil its function as an efficient coordination centre and communication centre for the whole school.



THE PHYSICAL EDUCATION, DRAMA AUDITORIUM BUILDING

- Multi purpose area - could be used for noonday meetings or, by modulating lighting, for a social event such as a pop concert or cabaret.

23.0 CONCLUSION.

The schematic plan of the entire space, while the facilities could be spread out this way if the school were built in the suburbs, they need not be: the clusters and other buildings could occupy separate floors of a city skyscraper (or East End Market), for example.

The important point is to preserve the indicated relationships - the physical separateness and unity of each of the clusters - the central position of the library and of the top administrative cadre - the accessibility of the specialised facilities for science-mathematic career skills that serve the entire student body.

One of the clusters is shown arranged in conventional self-contained classrooms, while the others show the same space disposed for optimum use of flexible groupings and scheduling, team-teaching and audio-visual devices.

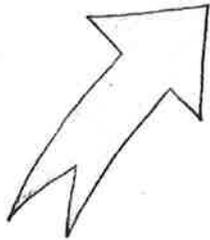
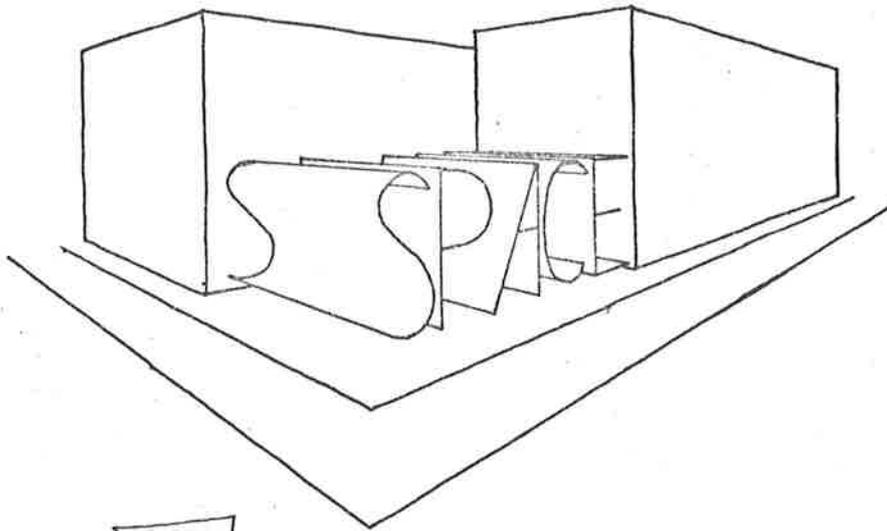
The school is designed to permit evolution in educational techniques to accommodate the variety of instruction it will have to house through its lifetime.

The schematic plans are not for any particular community, but as a stimulus to open up the options in school design. Too many schools are planned by habit alone. These are not definitive schools but transitional schools for an era in which education is facing new demands and learning to live with new techniques and new tools.

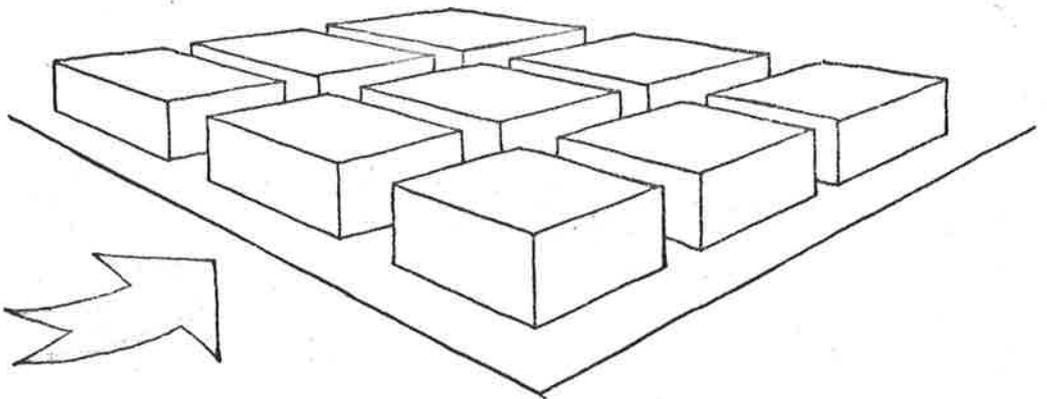
These schools were also designed to avoid the dull, cold, repetitive, institutional quality that characterises so many of our schools today. The intent of this thesis is to give school planners a wide choice of options in designing new facilities or upgrading old ones.

The plans suggested here are essentially simple, open, and flexible. Rather than dictating any particular instructional pattern or technological system, they are highly responsive to the educational desires of the particular people who will use them. They can accommodate the conventional self-contained classroom program if that is called for - but they do not lock the user into that pattern, if a different approach commends itself now or later on.

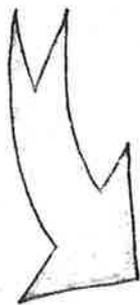
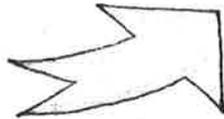
# SPACE



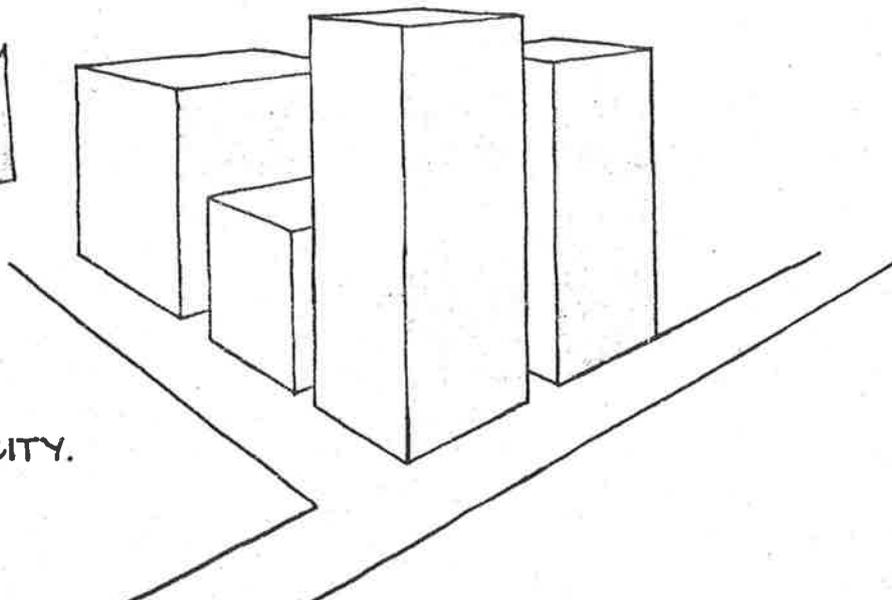
RESIDENTIAL.



ZONING  
DISTANCE  
CODES.



CITY.



24.0 WHERE TO - REACH OUT SCHOOLS - OPEN CAMPUS

The schools can effectively blend the resources of the school with the realities of society by bringing the community and its student body into single multi service centres ---- the community school.

# Open schools plan could beat vandalism

One way of helping to curb vandalism in schools could be to open them to expertly-run, community activities after teaching hours.

By Education Writer  
**LIZ BLIESCHKE**

On Thursday the Minister of Works (Mr. Corcoran) said in the Assembly that fire damage in 15 schools since July last year had totalled \$545,536.

Mrs. Emery says in the report: "Youth still may be negatively influenced by older friends, and these groups sometimes express their dissatisfaction through vandalism.

"While one alternative is to close the schools and attempt to make them impregnable to would-be vandals, the other is to open them up and make their facilities available to all members of the community.

"This has been done effective-

ly to cater for previously destructive groups in some areas, but considerable losses have been incurred.

"Once again, the expertise of the people conducting centres seem to determine their effectiveness."

The report suggests that frequently the attitude of school rebels is supported by parents who have become alienated from the school's goals and are hostile towards it.

Positive relationships with the parents should be established by the school before a contentious issue arises.

Police said their contact with youth was limited to punitive occasions and the report suggests they could play an informative role, making youths' rights

**'There has been little attempt to get information from kids about their attitudes'**

known to them, to establish a positive relationship.

Mrs. Emery said yesterday that approaching the problem of misbehaviour had always been a "stab in the dark."

"Often the school has not defined its own role," she said.

"They say they are there to teach the kids socially, but the teachers have not had much training in social difficulties and group processes.

"There has been little attempt to get information from kids about their attitudes towards their school."

She said teachers needed to get together to decide on an approach to help those students who were considered "disruptive."

If the whole spectrum of misbehaviour was considered an attempt could be made to help the youngsters involved before their activities became criminal.

Mrs. Emery said a public buildings repairman wanted to protect buildings from vandalism. He might say: "A vandal does damage because he likes smashing things up. He should be locked up."

A member of the judiciary

might say: "I have the responsibility to the public. He must make good the damage."

A teacher might say: "He's 14 and can't read. We aren't able to educate him now. He might as well leave."

An employer might say: "He can work for me until he's 18."

Mrs. Emery said the repairman's interest was in buildings, the judge's was in the general public, the teacher's was in the majority of the class and the employer's interest was in this case financial.

"The actions of these people are having an effect on the youth who is already misbehaving against circumstances which don't suit him," she said.

# SCHOOLS IN SA BEAT RAT-RACE

The atmosphere in SA State schools is enlightened,  
harmonious and quietly productive . . .

But in NSW State schools, there is an air of tension and frustration . . .

In both States however, there is one common bond: widespread public feeling against lack of discipline in the classroom.

## ◦ 'A BETTER IMAGE'

These are the findings of a survey, produced by the research officer with the South Australian Institute of Teachers, Ms C. Lloyd-Wright, and the research secretary with the NSW Teachers' Federation, Mr. W. Adams.

The project was initiated by the NSW Federation which opposes proposed introduction of school councils.

In determining the level of community involvement in education in Sydney and Adelaide, the researchers found that SA

schools had a better image with the public who were less critical than in Sydney.

Comparisons were based on assessments in eight school areas and 15 schools and included the social and political environment.

### RESEARCH

Researchers reported that community involvement was best promoted by opening schools, allowing a flexible structure of school governance to evolve and introducing liaison personnel.

The survey found: "The parents of children at Catholic schools seemed more satisfied than parents of State school students and to have a greater sense of involvement in the school."

From ANNE RUBINSTEIN  
in London

LIBERAL ("PROGRESSIVE") TEACHING methods, which have brought a free-and-easy atmosphere to many classrooms in Britain's State-run education system, are under attack in an intense and emotive national debate.

The British are hesitating as critics suggest that the new methods may be producing a generation of semi-literate idlers.

Educators are asking: Should we return to more discipline and more traditional techniques?

British schools at the start of the 20th century were gloomy places where children often sat rock-like in terrified silence in rows of desks. Today schools are more likely to have sunny, open-plan rooms where the pupils are much more active and talkative.

Conservative politicians have always attacked the progressive methods but now the argument is growing among the educators themselves.

The critics of the modern methods include many headmasters of private fee-paying schools but an increasing number of State-school teachers have joined their ranks.

Industrial chiefs have also spoken up, claiming that Britain's schoolchildren will emerge into the tough business world of the 1980s able to do little more than write their names and with only rudimentary knowledge of maths, and spelling.

Some critics allege that many State schools are in the grip of politically-motivated teachers who simply encourage

THE 'AUSTRALIAN' JULY 27 - 1976

# More critics of modern teaching

children to undermine the system without teaching them to master basic skills.

Against these arguments, the progressives say that children are in fact academically better and are developing highly-stimulated imaginations with a lack of class and social prejudice.

The conflict between traditional teaching methods and the new educational theories has come to a head after several enquiry reports indicated that the country's educational standards, as measured through national examinations, were declining.

Public attention has been riveted by a report on the William Tyndale junior school in London's Islington district, where children rarely had set classes but could choose to work in various groups for different subjects.

The school had a large proportion of pupils from middle-class homes, whose parents had high aspirations for them, together with many from black, immigrant and deprived homes.

Parents started worrying when their 10 and 11-year-olds became unmanageable at home and were failing to acquire basic literacy and numeracy. The number of pupils at the school dropped dramatically from 230 to 114.

Acrimony among teachers and between teachers and parents and school managers led to a protest strike by some staff at William Tyndale and finally an

Independent public enquiry into the school.

"At Tyndale," said the report, "deterioration was there for all to see. Children openly defied their teachers and swore at them ... absented themselves from classes and wandered about the building and playground during school hours. There also seemed to be an increase in aggression and fighting among the children."

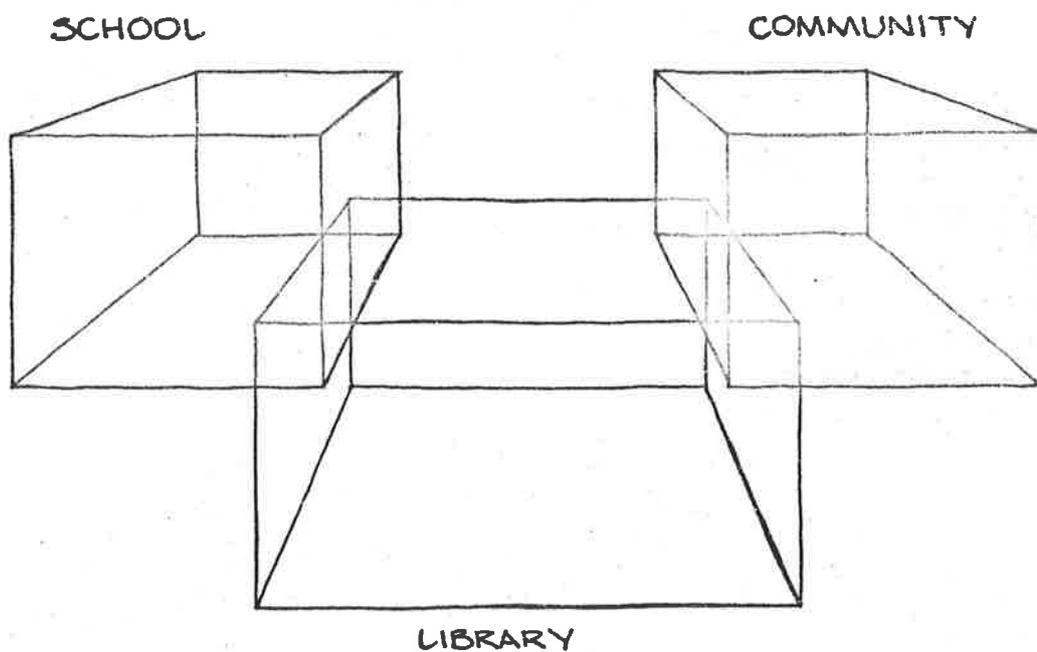
The report told how one woman teacher chafed up on the blackboard: "I hate reading groups," and sent her class out to play.

It dealt at length with the role of another of the teachers, 28-year-old Brian Haddow, referred to as "aggressive and doctrinaire" and the main architect of the school's troubles. He was hooked on the notion that education was primarily for the working classes and he saw schooling as a way of promoting social change, the report said.

To varying extents, this social motivation has influenced the thinking of most British educationists in the past 20 years.

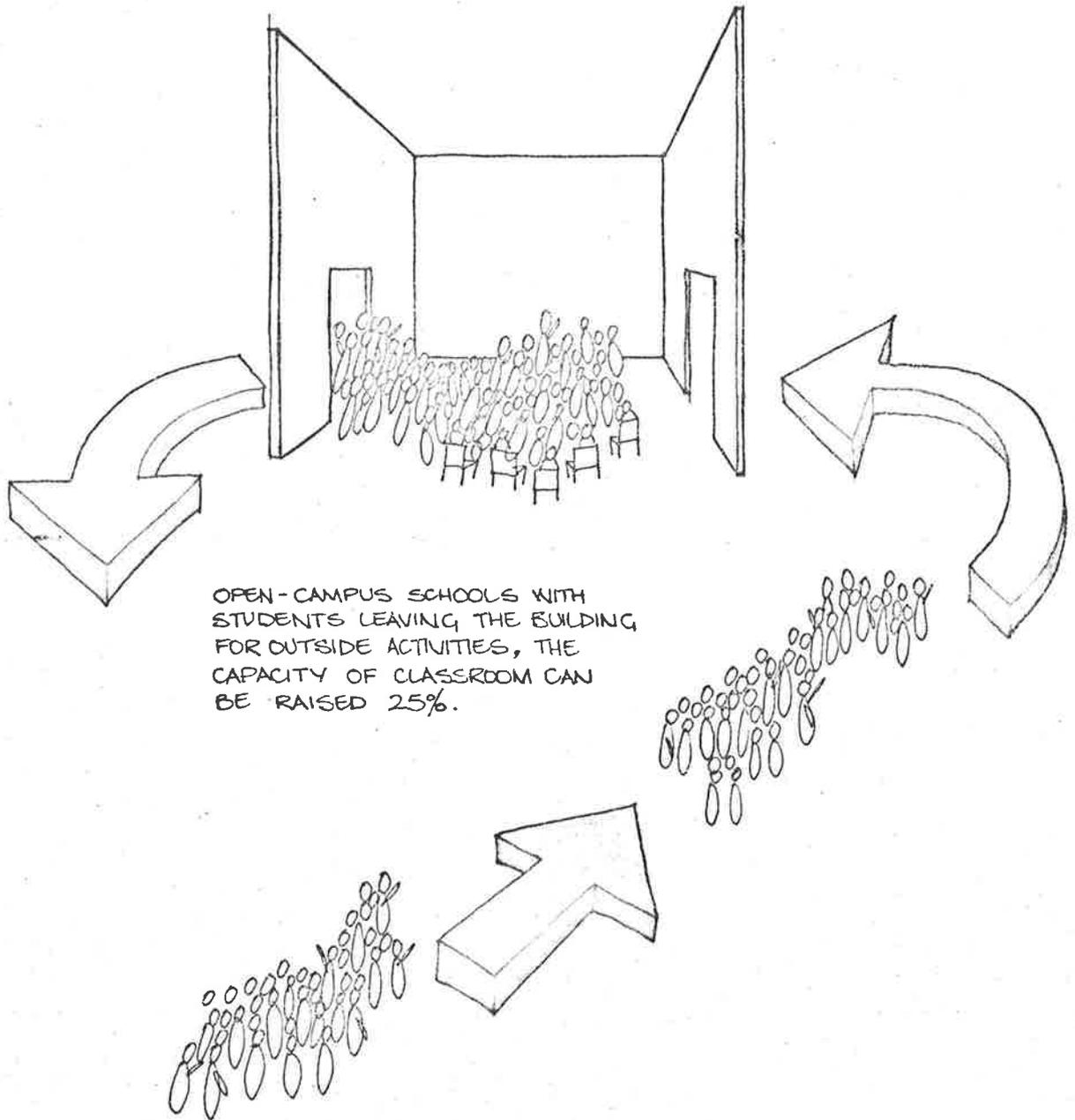
As Britain moved away from the 19th Century belief that a child could be caned into learning, it was fashionable to encourage creativity, and poor spelling ability did not seem to matter. But now reaction has set in and many here think the progressive process has gone far enough. — AAT-Reuters.

# SCHOOL AND COMMUNITY FACILITIES



RESOURCE CENTRES AT THE HEART

# OPEN CAMPUS



“Flexibility between  
the walls is no good  
without flexibility  
between the ears...”

APPENDIX

QUESTIONNAIRE A

NUMBER

(Office use only)

\* N.S. = Not scored  
N.A. = Not applicable

THE TEACHER'S PERSONAL AND PROFESSIONAL DEVELOPMENT

(Please tick the appropriate response and add comment if you wish)

1. How do you rate your satisfaction in teaching in general?

COMMENT

most <del>unsatisfying</del>	<u>1</u>
some satisfaction but not a great deal	<u>1</u>
moderately satisfying	<u>8</u>
satisfying on the whole but not fully	<u>50</u>
fully satisfying	<u>21</u>
N.S.	<u>1</u>

2. How do you rate your satisfaction in teaching in an open space unit?

COMMENT

most unsatisfying	<u>-</u>
same satisfaction but not a great deal	<u>10</u>
moderately satisfying	<u>5</u>
satisfying on the whole but not fully	<u>56</u>
fully satisfying	<u>9</u>
N.S.	<u>1</u>
N.A.	<u>1</u>

3. How do you rate your growth as a person since involvement in open space teaching?

COMMENT

greatly hampered	<u>2</u>
hampered	<u>1</u>
steady	<u>37</u>
accelerated	<u>36</u>
greatly accelerated	<u>2</u>
N.S.	<u>4</u>

N.S.

3

4. How do you rate your professional growth since involvement in open space teaching? COMMENT

greatly hampered	<u>  -  </u>
hampered	<u>  1  </u>
steady	<u> 24 </u>
accelerated	<u> 47 </u>
greatly accelerated	<u>  8 </u>
<i>N.S.</i>	<u>  2 </u>

5. How were you appointed to the open-space unit? COMMENT

volunteered and accepted	<u> 30 </u>
was asked and accepted	<u> 36 </u>
allocated	<u> 14 </u>
other (please specify)	<u>  - </u>
<i>N.S.</i>	<u>  1 </u>
<i>N.A.</i>	<u>  1 </u>

6. When would training in organization of the teaching programme in an open space unit have been most helpful to you? (Multiple scoring is valid.)

(a) in teachers' college	<u> 29 </u>	<u>COMMENT</u>
(b) 6 months prior to entry to unit	<u> 35 </u>	
(c) 3 months prior to entry to unit	<u> 29 </u>	
(d) 1 month prior to entry to unit	<u> 30 </u>	
(e) 1 month after entry to unit	<u> 16 </u>	
(f) 3 months after entry to unit	<u> 29 </u>	
(g) 6 months after entry to unit	<u> 19 </u>	
(h) other (please specify)	<u>  5 </u>	
<i>N.S.</i>	<u>  1 </u>	

7. Would assistance in the development of positive interpersonal relationships within the open space environment have been helpful to you? (Multiple scoring is valid.)

		Yes	No	
If 'Yes', when?		<u>46</u>	<u>30</u>	<i>N.S.</i> 3
(a) in teachers' college	<u>  9 </u>			
(b) 3 months prior to entry to unit	<u> 16 </u>			<u>COMMENT</u>
(c) just prior to entry to unit	<u> 27 </u>			
(d) just after entry to unit	<u>  5 </u>			
(e) 3 months after entry to unit	<u> 12 </u>			
(f) other (please specify)	<u>  2 </u>			
<i>N.S.</i>	<u>  3 </u>			

8. What 'inservice' facility would most adequately provide you with continuing open space teacher education?

COMMENT

residential conferences	<u>26</u>
day conferences	<u>25</u>
visits by consultants	<u>16</u>
observation visits	<u>51</u>
reading lists	<u>9</u>
other (please specify)	<u>3</u>
N.S.	<u>1</u>
N.A.	<u>1</u>

9. What do you think are the personal qualities most needed in an open space teacher and yet not essential in the ordinary classroom teacher?

see attached sheet for comment

10. What do you consider the optimum period of continuous teaching service in the one open space unit with the same team?

COMMENT

never	<u>-</u>
one term	<u>-</u>
1 year	<u>15</u>
2 years	<u>36</u>
3-5 years	<u>14</u>
over 5 years	<u>3</u>
N.S.	<u>16</u>

11. Has open space teaching created pressures on other areas of your private life?

Yes	No
<u>59</u>	<u>22</u>

COMMENT

If 'Yes', are these pressures

debilitating	<u>-</u>
tiring	<u>32</u>
quite tolerable	<u>15</u>
stimulating	<u>12</u>
exhilarating	<u>1</u>
N.S.	<u>2</u>
N.A.	<u>1</u>

QUESTIONNAIRE A Q. 9

Personal qualities most needed in O.S. teacher, yet not necessarily essential for classroom teacher.

Responses

- (3) Confidence in self
- (9) Humility with colleagues, willingness to take second place.
- (8) Trust for others ideas
- (5) Ability to listen to others
- (7) Willingness to share ideas
- (5) Ability to give and take criticism
- (1) Courtesy
- (10) Sense of humour
- (2) Happy disposition
- (3) Patience
- (27) Tolerance
- (15) Flexibility
- (13) Adaptability
- (8) Honesty and frankness
- (6) Open mind
- (20) Ability to relate satisfactorily with others
- (31) Ability to co-operate in a team
- (9) Full willingness to share responsibility
- (12) Ability and willingness to experiment
- (1) Greater backing-up of teachers in open space
- (1) Knowledge of group dynamics
- (2) Ability to organise
- (2) Preparedness to prepare
- (1) Ability to keep standards set
- (2) Preparedness to spend time sharing ideas
- (1) At least two years prior teaching experience
- (6) Creativity
- (3) Dedication to children as individuals
- (1) Ability to communicate with all the children and know them
- (2) Ability to remain positive in the face of outside criticism and apparent failure
- (1) Excellent health
- (1) Capacity for sticking to it long after you're exhausted
- (2) Ability not to hear noise
- (8) No comment

NOTE : Scored by individual responses:

---

QUESTIONNAIRE B

NUMBER

(Office use only)

RELATIONSHIPS WITHIN OPEN SPACE STAFF

(Please tick the appropriate response and add comment if you wish)

1. (a) How many hours per week do you spend in a team meeting preparing or planning for teaching?
- (b) How many hours per week did you spend in planning for co-operative individual classroom teaching? (Answer only if question applicable.)
- (c) How many hours per week do you spend in individual preparation for teaching?
- (d) How many hours per week did you spend in individual preparation for individual classroom teaching? (Answer only if question applicable)

	open space	individual classroom
team	(a)	(b)
co-operative	58 → 17 1/2 hrs 3.0 hrs	15 → 42 hrs 2.8 hrs
individual	(c)	(d)
	63 → 51.3 8.2 hrs	49 → 40.5 8.3 hrs
Total	63 → 68.7 hrs 10.9 hrs	49 → 44.7 hrs 9.1 hrs

2. What advantages do you enjoy through teaching in a unit?

---



---

3. What disadvantages do you suffer through teaching in a unit?

---



---

4. What personal talents of yours have gained greater opportunity for expression only in the open space unit?

---



---

5. At what point was teaching team cohesion highest?

COMMENT

(a) <sup>1 month</sup> before entry into unit	<u>2</u>
(b) just prior to entry into unit	<u>7</u>
(c) just after entry into unit	<u>9</u>
(d) 1 month after entry into unit	<u>12</u>
(e) 6 months after entry into unit	<u>24</u>
(f) other (please specify)	<u>26</u>
N.S.	3
N.A.	

6. In what size units have you taught?

2	<u>37</u>
3	<u>3</u>
4	<u>22</u>
5	<u>2</u>
6	<u>24</u>
other (please specify)	<u>-</u>
N.S.	3
N.A.	-

7. In your opinion, what size team would function most effectively?

COMMENT

(a) 2 members	<u>47</u>
(b) 3 members	<u>17</u>
(c) 4 members	<u>24</u>
(d) 5 members	<u>4</u>
(e) 6 members	<u>1</u>
(f) 7 or more	<u>-</u>
N.S.	1
N.A.	-

8. Are changes you personally consider desirable easy to implement?

Yes	No
<u>51</u>	<u>17</u>

9. How do you rate your involvement in co-operative planning and teaching?

	(i) enjoyment	(ii) participation	(iii) influence
very low	<u>3</u>	<u>2</u>	<u>2</u>
low	<u>-</u>	<u>3</u>	<u>5</u>
moderate	<u>19</u>	<u>20</u>	<u>26</u>
high	<u>36</u>	<u>31</u>	<u>33</u>
very high	<u>20</u>	<u>21</u>	<u>14</u>

N.S. 3  
N.A. 1

QUESTIONNAIRE C

NUMBER

(Office use only)

RELATIONSHIPS WITH OTHERS: SENIOR STAFF, OTHER STAFF, PARENTS.

(Please tick the appropriate response and add comment if you wish)

1. How frequently do you see your head during the day?

COMMENT

never 1  
rarely 31  
often 32  
very often 11  
N.S. 1  
N.A. 2

2. How frequently do you see your deputy head during the day?

COMMENT

never 1  
rarely 25  
often 27  
very often 17  
N.S. 2  
N.A. 6

3. How has open space teaching affected the quality of your relationship with your head?

COMMENT

greatly damaged -  
damaged 3  
steady 43  
enhanced 26  
greatly enhanced 3  
N.S. 1  
N.A. 2

4. How has open space teaching affected the quality of your relationship with your deputy head?

COMMENT

greatly damaged -  
damaged -  
steady 46  
enhanced 16  
greatly enhanced 6  
N.S. 3  
N.A. 7

5. How often do you mix with staff not in the unit?

COMMENT

never         
 rarely   12    
 often    41    
 very often  26   
 N.S.    -    
 N.A.    -  

6. How has open space teaching affected the quality of your relationship with other teaching staff not in the unit?

COMMENT

greatly damaged    1    
 damaged    7    
 steady   63    
 enhanced    5    
 greatly enhanced    1    
 N.S.    2    
 N.A.    -  

7. Do you have a 'home' group of children in your unit?

Yes

No

53

23

N.A. 2

8. How well do you feel you know your 'home' group of children? (If applicable)

COMMENT

not at all    -    
 vaguely    1    
 fairly well   32    
 very closely   20  

9. How well do you feel you know the total unit group?

COMMENT

not at all    1    
 vaguely   13    
 fairly well   51    
 very closely   16    
 N.S.    1    
 N.A.    -  

10. How well do you know the parents of children in your unit?

COMMENT

not at all    2    
 vaguely   33    
 fairly well   44    
 very closely    3    
 N.S.    2

11. Approximately what percentage of your unit parents have visited the unit? COMMENT

0 - 4                
 5 - 9           1     
 10 - 19         2     
 20 - 29         1     
 30 - 39         6     
 40 - 49         5     
 50 - 74        26     
 75+            35     
 N.S.             3     
 N.A.             -   

12. Of those who have visited the unit, how do you rate their response to it? COMMENT

antagonistic                
 sceptical               4     
 interested            56     
 warmly enthusiastic   12     
 N.S.                     3     
 N.A.                     -   

13. Indicate how many hours per month your unit would be visited by COMMENT

	0	1-2	3-5	6-10	11-20	21+
parents	1	60	9	5	3	-
civic dignitaries	44	26	-	-	-	-
departmental administrators	12	36	23	-	1	2
teachers from other schools	2	24	23	4	16	6
researchers	21	33	3	11	2	-
student teachers	8	23	14	5	3	13
other child groups	35	23	5	1	-	2
others (please specify)	5	22	1	2	1	2

*Individual scores - not by schools*

14. Estimate how many hours per month you spend in preparation of reports, questionnaires, etc. for interested parties outside of your school. COMMENT

0                  12     
 1                  30     
 2 - 3              17     
 4 - 5               6     
 6 - 8               4     
 9 - 12              -     
 13 or more         5     
 N.S.                 4     
 N.A.                 -

15. What is your response to their intrusions?

	highly disturbing	moderately disturbing	not noticed	welcomed	welcomed enthusiastically
parents	-	6	5	53	13
civic dignitaries	-	5	19	27	1
department administrators	-	10	19	36	5
teachers from other schools	1	9	5	49	12
researchers	-	12	20	32	3
student teachers	3	2	8	43	18
other child groups	-	6	13	27	3
reports, etc.	3	29	12	14	2
other (please specify)	-	1	1	5	5

*Individual scores - not by schools*

QUESTIONNAIRE E

NUMBER

(Office use only)

TEACHING PRACTICES WITHIN THE OPEN-SPACE UNIT

(Please tick the appropriate response and add comment if you wish)

1. Did you adopt any patterns of teacher co-operation on entry to the unit?

Yes  42 No  - N.S. 7

If 'Yes', please indicate the type or types.

COMMENT

Working as Individual classes 20  
 Working classes in pairs 25  
 Working classes in ~~other~~ combinations 23  
 Specialising in subject areas 58  
 Working as a total unit group 30  
 Teaching across levels in subjects 54  
 Teaching across grades in subjects 29  
 Other 21

2. What pattern of teacher co-operation are you currently using?

Working as Individual classes 23  
 Working classes in pairs 18  
 Working classes in other combinations 29  
 Specialising in subject areas 54  
 Working as a total unit group 34  
 Teaching across levels in subjects 52  
 Teaching across grades in subjects 38  
 Other 0

N.S. 2  
 N.A.

3. Did you make preparations for entry into the open space unit?

Yes  60 No  17 N.S. 2

If 'Yes', were they

COMMENT

Reading 46  
 Visit to other units 46  
 Staff discussions 49  
 Discussion with specialist staff 13  
 Attendance at conferences 37  
 Other (please specify) 4

4. Did you encounter major problems at entry?

Yes  52 No  19 N.S. 7  
N.A. 1  
COMMENT

If 'Yes', did they concern

Timetabling 42  
Working as a group of teachers 17  
Furniture 21  
Audio Visual Equipment 11  
Other Equipment 7  
Noise levels 41  
The number of children 19  
Location of children 15  
Other (please specify) 2

5. Do you plan so that changes can be easily made?

Yes  69 No  7 N.S. 3  
COMMENT

If 'Yes', in what areas?

Equipment 48  
Timetabling 53  
Grouping 52  
Location of groups 55  
Location of resources 45  
Deployment of staff 32  
Other (please specify) 3  
N.S. 1  
N.A. -

6. For approximately how many hours of the week do you direct a less-than-normal class-size group of children?

0-1	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17 or more	
1	17	8	4	8	8	6	6	3	12	N.S. 4 N.A. 2

7. For approximately how many hours of the week do you direct a greater-than-normal class-size group of children?

0-1	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17 or more	
1	25	14	12	5	4	1	1	4	2	N.S. 7 N.A. 3

8. How is your teacher-talk distributed amongst the students?

	Little				A Lot
(a) to individuals	3	5	12	23	32
(b) to groups of up to 10 children	5	1	27	27	12
(c) to groups between 10 and 20 children	8	4	27	12	12
(d) to a whole class-size group	13	12	12	27	15
(e) to a group greater than single-class size	24	22	15	2	2

9. Rate the time spent by each child in the following categories.

	Little			A Lot	
(a) by himself	10	13	22	13	15
(b) in groups of up to 10 children	3	17	22	12	15
(c) in groups of between 10 and 20 children	12	17	18	12	12
(d) in a class-size group	7	16	25	13	15
(e) in groups greater than single-class size	30	22	2	2	5

10. For each category below, nominate the subject which occupies most of the time a child would spend in that group during a week.

	SUBJECT
(a) alone	
(b) in a group of the same sex } but working alone	<i>See attached sheet for comments</i>
(c) in a mixed group	
(d) in a group of the same sex } and working with part of the group	
(e) in a mixed group	
(f) in a group of the same sex } and working with all of the group	
(g) in a mixed group	

11. Do you attempt to programme for individual differences?

Yes	No	NS	1
75	3	N.A.	-

If 'Yes', please briefly indicate the ways.

*See attached sheet for comments*

12. Do you make provisions for children to pursue special interests?

Yes	No	NS	6
51	23	N.A.	-

If 'Yes', does it cover

Method of timetabling	17
Availability of resource persons	26
Availability of resource equipment	32
Use of specified learning areas	27
Other (please specify)	6
NS	6
N.A.	1

COMMENT

13. Nominate one or two learning activities you have found to be particularly advantageous in open space teaching?

← see attached sheet  
for comment

14. What procedures have you adopted for student assessment and progress recording and reporting?

(a) oral reporting	<u>51</u>	<u>COMMENT</u>
(b) personal <del>written</del> comments	<u>54</u>	
(c) personal grade scores	<u>41</u>	
(d) academic written comments	<u>33</u>	
(e) academic level scores	<u>36</u>	
(f) anecdotal records	<u>28</u>	
(g) student-teacher planning and report sessions	<u>11</u>	
(h) collective team reporting	<u>29</u>	
(i) other (please specify)	<u>1</u>	
N.S.	<u>3</u>	
N.A.	<u>-</u>	

Most frequently used subject for each grouping of children

SUBJECT	Alone	Working alone		Working with part of the group		Working with all of the group	
		With the same sex	In a mixed group	With the same sex	In a mixed group	With the same sex	In a mixed group
<u>Language &amp; Literature</u>							
Reading & library	27	2	109	65	1612	3	1210
Spelling & phonics	1110	3	96	21	9	34	10
Language	1	1	45	2	6	1	1
Written Language	56	1	78	3	6	2	3
Oral Language	-	1	-	1	3	12	23
Drama	-	4	-	-	32	3	4
<u>Maths</u>							
Maths	1715	8	2523	43	9	32	54
Science	-	2	32	10	6	-	3
<u>Environmental &amp; Creative Studies</u>							
Social Studies	1415	9	78	89	2324	7	1718
Art & Craft	32	4	2	8	10	2	1513
Music	-	-	-	-	1	1	1615
Physical Education	-	1	-	4	6	5	98
Health	-	-	-	-	2	3	2

NOTE : 1. It is of interest to note that, when asked to nominate subjects, respondents listed 37 subjects as taught in the primary school. This list was reduced to 13 subjects for the purposes of the table.

2. Scores listed by individual responses.

S U B J E C T S		M A T E R I A L S			G R O U P I N G S					M A I N D E V E L O P M E N T A L E M P H A S I S				NOT SCORED NOT APPLICABLE NOT USED			
Total (incl Reading Reading	Language & Literature	Maths and Science	Environmentally and Creative Studies	Not specified	Commercially Prepared	Teacher Prepared	Not specified	Setting (= Cross)	Ability	Other	Individual	Not specified	Academic	Social	Personal	Not specified	
46 #9	37 #4	44 #6	14 #3	23	29 #2	27	29 #3	13 #2	55 #7	9	47	1	14	8	18	52 #5	4

NOTES : 1. Scores are based on individual responses.

2. Reading scores are automatically contained under the language totals. Where a response has programming for individual differences in, say, Reading and Spelling, the Language total has been scored only once to contain both Reading and Spelling.

3. Where the word "carded" or "cards" has been used, it has been scored under Materials as "Teacher Prepared" unless it specifically used a trade name with the card; similarly under Groupings it has been scored "Individual".

4. Under "Main Developmental Emphasis", the 'Academic' score is obtained because most respondents specified a 'Social' or 'Personal' emphasis too. Some specified only a 'Social' and/or 'Personal' emphasis.

Questionnaire E No. 13Learning activities enhanced in Open Space teaching

1. (9) Maths - availability of space and materials.
2. (11) Social studies - availability of space and materials.
3. (7) Environmental studies - opportunities for individual and group research.
4. (4) Science experiments - more space, equipment, individual/group work.
5. (1) Science experiments - can be kept set up over a period of time.
6. (1) Reading - setting allows quick movement of large groups.
7. (2) Reading and spelling - group schemes.
8. (1) S.R.A. II (a), (b), (c) labs., EPIC lab.
9. (2) Creative language and movement.
10. (1) 'Crossing the stream' for spelling.
11. 6(2) Oral and written language - use of sound proof rooms and flexible equipment.
12. (6) Drama - availability of suitable working areas.
13. (6) Individual progression, e.g. Maths and Spelling.
14. (2) Subjects more interesting to children and teachers through use of specialist teachers and a variety of groups.
15. (7) Music in unit and withdrawal rooms.
16. (2) Mime
17. (3) Dance - creative and folk (especially in wet weather)
18. (2) Working with A.V. equipment.
19. (3) Use of tape recorders.
20. (4) O/H and F/S projectors for S.S. and Maths.
21. (2) O/H projectors for phonics, spelling and reading.
22. (10) Listening posts for development of listening skills, reading, etc.
23. (2) Group reading and spelling schemes.
24. (8) Small and large group activity.
25. (2) Circles sitting on floor - relaxed - able to see and hear.
26. (1) Small groups - still under visual control and voice absorbed.
27. (8) Co-operation with peers in interaction and decision-making.
28. (2) Well situation inspires confidence.
29. (2) Camping plays a bigger role than ever in the personal relationships we need.
- 30 (1) *Integrated topic*

NOTES : 1. These are individual scores  
2. 'Not scored' = 26.

QUESTIONNAIRE F

NUMBER

(Office use only)

THE OPEN SPACE UNIT AND THE CHILD

(Please tick the appropriate response and add comment if you wish)

1. Do you know the basis on which the class grades for your open space unit were selected?

Yes	No	N.S	7
58	14	N.S	7

COMMENT

If 'Yes', please describe it

Appropriate grades	<u>50</u>
Poor previous classrooms	<u>1</u>
Volunteer teachers	<u>19</u>
Most experienced teachers	<u>1</u>
Other (please specify)	<u>5</u>

2. By what methods were the children within these grades selected to be in the open space unit? (Answer question only if applicable.)

*see attached sheet for comment*

3. How many children have been removed from your open space unit this year because it was considered unsuited to them?

By teachers' initiative	<u>82</u>	By parents' requests	<u>6</u>
<i>6 schools involved</i>		<i>4 schools involved</i>	
<i>32 in one class</i>			
<i>24 in another</i>			
<i>12 " "</i>			
<i>68</i>			

4. Compared with normal classroom teaching what has been the effect of open space teaching in the development of children in the areas listed below:

*see correction sheet for this*

5. How self-directed are your children? (For example, do they programme their own learning assignments, use withdrawal rooms and resource centres at their choosing, retire to the toilet without seeking permission etc.)

extremely teacher directed	<u>2</u>	<u>COMMENT</u>
teacher directed	<u>52</u>	
self-directed	<u>35</u>	
extremely self-directed	<u>4</u>	
N.S.	1	
N.A.	-	

6. In what areas of the school environment are the children encouraged to make decisions (a) as an individual and (b) as a member of a group?

(a) \_\_\_\_\_ COMMENT

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. How much has the open space unit assisted in the resolution of the child isolate's difficulties?

greatly restricted	<u>1</u>	<u>COMMENT</u>
restricted	<u>3</u>	
steady	<u>24</u>	
enhanced	<u>33</u>	
greatly enhanced	<u>12</u>	
N.S.	5	
N.A.	1	



QUESTIONNAIRE F Q. 6Areas in which children make decisions.(a) INDIVIDUAL

1. (1) The school climate, built up over several years, has severely inhibited decision making of any real importance by children.
2. (2) / Choosing own Maths, Phonics and Morning activities.
3. (1) 2 To work independently at own rate, but to complete assignments by a certain date.
4. (9) Programming in Social Studies and Art.
5. (4) 5 Timetabling in English, Reading, Social Studies, Sport.
6. (2) Choice of activities in research time.
7. (1) With personal organisation for the day : books etc.
8. (1) With choice of activities after set work is done.
9. (2) Choice of groups for hobby time.
- ~~10. (1) Choice during play activity each morning.~~
11. (1) 2 To settle down to work and not annoy others.
12. (1) Some sports, P.Y.E. Club.
13. (1) Toilets.
14. (3) Various Clubs - Music, Magazine, weekly 'Radio' broadcast.
15. (3) Use of equipment.
16. (1) Seating arrangements.
17. (1) Choice of topics for oral language.
18. (1) Towards what areas of study he wishes to pursue (e.g. keen on Art, Illustrations; Maths, use of computers, etc.)
19. (1) Class parliament with duties internal and external : Ministers individually responsible. Responsible children assume control when teacher not present and lead children through programmed work.
20. (3) 2 Resource activities, Art, Creative Writing.
21. (1) Physical working area.
22. (1) Homework : may choose to do more than set work.
23. (1) Personal values : respect, tolerance, honesty etc.
24. (1) Setting academic and behavioural goals in lessons and in playground.
25. (1) Discussion before council meetings.
26. (1) On wet or cold lunch breaks children remain inside and choose own activity.
27. (1) Choice of work partners.

(b) AS A GROUP MEMBER

1. (1) Group decisions rarely made : a start has been made to give a "Unit Council" certain decision making powers.
2. (5) Project work - leader election, set out materials and research.
- ~~3. (1) Choose room decorations to make in Art.~~
4. (4) Unit Council.
5. (2) 3 In all class policy children are consulted.
6. (1) Deciding what to do in resource time.
- ~~7. (1) Craft and Art.~~
8. (2) Organisation of student facilities.
9. (1) Their own work.
10. (1) Oral Language.
11. (1) Organising excursions.
12. (1) Various Clubs - Music, Magazine, weekly 'Radio' broadcasts.
13. (2) / Unit cleanliness.
14. (2) Care of building.
15. (1) 2 Timetabling.
16. (5) S.S. group - choice of study areas.
17. (1) Election of monitors.
18. (1) Class Council has freedom to arrange any "social" activities (outings, competitions with others, etc.) approved by the administration, and may request or advise on a wide range of "educational" issues - camps, science topics, class discipline - (teachers retain veto.)
19. (1) Drama.
20. (2) Direct learning experiences appropriate to group.
21. (1) Natural science.
22. (1) Use of equipment.
23. (1) Group reading scheme.

NOTES

1. Scores are on the basis of school responses.
2. Little attempt has been made at classifying responses.

to be scored, in total, later on the  
 control basis of using this response  
 to filter all others in Q10. Only 60  
 out of 79 of these forms returned  
 Nevertheless even on the basis of  
 60 returns only 1 responding school  
 was not still covered by other  
 individual responses.

QUESTIONNAIRE D.

PHYSICAL ARRANGEMENTS AND EQUIPMENT.

Page 3, Question 10.

Prior to the rate scale for the various aspects of units there should be a control column in which you score whether or not your unit has the relative equipment. Please complete such a score listing and we will attach the list on your other responses.

- withdrawal rooms
- room dividers
- teachers preparation room
- wet areas
- covered exterior areas
- a desk area for each student
- a desk area for 50% of students
- a chair for each student
- a chair for 50% of students
- soft ware
- natural lighting
- artificial lighting
- exposed steel roof beam
- carpet flooring
- acoustic tiling
- toilet facilities
- shelving
- library books
- A.V. equipment

QUESTIONNAIRE F.

THE OPEN SPACE UNIT AND THE CHILD

Page 1, Question 4 should have read:

Compared with normal classroom teaching what has been the effect of open space teaching in the development of children in the areas listed below: (Please tick ~~the~~ appropriate description in each area)

A. Curricula

I Academic (Maths, English)	-	<u>28</u>	<u>31</u>	<u>1</u>
	severely retarded	normal	enriched	greatly enriched
II Cultural (Social Studies, Art, Craft, etc)	-	<u>16</u>	<u>32</u>	<u>13</u>
	severely retarded	normal	enriched	greatly enriched

B. Social

(i.e. interpersonal)	-	<u>7</u>	<u>40</u>	<u>16</u>
	severely retarded	normal	enriched	greatly enriched

C. Personal

(i.e. emotional)	-	<u>18</u>	<u>37</u>	<u>9</u>
	severely retarded	normal	enriched	greatly enriched

N.S. 2  
N.A. -

---

QUESTIONNAIRE G

NUMBER

(Office use only)

What would you wish to report ~~to the Conference~~ *to the Conference* as the most significant aspect of your unit's environment or procedures - an aspect that, in your opinion, demands recognition and reproduction, for the benefit of all.

TEACHER'S EVALUATION OF PRIMARY SCHOOL

OBJECTIVES

(T.E.P.S.O.)

School No. \_\_\_\_\_

Date \_\_\_\_\_

Teacher No. \_\_\_\_\_

Researcher \_\_\_\_\_

- 
- 
- This form contains a list of twenty-two (22) objectives which might be suitable for Primary Education.
  
  - For each objectives you are asked to indicate, on a five point scale, your feeling about its importance and also its attainability in your present classroom environment assuming the headmaster accepts your priorities.
  
  - In addition, you are asked to rank the three most important objectives on the basis of what has happened in your classroom this year.

A. THE AIM OF PRIMARY EDUCATION IS TO PROVIDE AN ENVIRONMENT IN WHICH EACH CHILD:

How Important  
Is It?

How attainable  
is it in your  
present class-  
room environment  
assuming the H.M.  
accepts your  
priorities?

High                      Low

(a) Contributes his ideas clearly and honestly (both verbally and non-verbally) in different settings.

High                      Low

(b) Listens to others attentively and with comprehension.

(c) Expresses his ideas directly and honestly in writing.

(d) Reads with comprehension, and sometimes critically.

(e) Has a positive self image; considers himself a worthwhile person.

(f) Thinks logically and with some creativity.

(g) Makes decisions about what to learn and how to learn it.

(h) Operates audio-visual equipment.

(i) Accepts rules of institutions and societies, but attempts to change or constructively criticize these in appropriate ways where they conflict with personal conscience.

(j) Develops the skills (including the ability to learn and change) necessary to survive in a rapidly changing technological society.

How Important  
Is it?

High                      Low

(k) Seeks new experiences as a means of learning about himself and the world.

(l) Shows initiative in school problem situations.

(m) Is self-reliant; is not over-dependent on the teacher.

(n) Develops and clarifies his personal values.

(o) Has some choices about use of leisure time which give personal satisfaction.

(p) Computes accurately (basic arithmetical processes).

(q) Shows skill in handling mathematical relationships (algebraical, geometrical).

(r) Has skill in interpreting data through visual observation.

(s) Wants to learn more; has a positive attitude to learning in and out of school.

(t) Handles interpersonal relationships (love and conflict) in a constructive manner.

(u) Recalls a number of facts in specific subject areas.

(v) Comprehends basic concepts related to subject areas.

How attainable is  
it in your present  
classroom environment  
assuming the H.M.  
accepts your priorities

High                      Low

- B. From the list of twenty-two (22) objectives rank the three most important on the basis of what has happened in your classroom this year. (place the letter representing the selected objective in the space provided).

Rank	Objective
Most Important	
2nd Most Important	
3rd Most Important	

- C. From the list of twenty-two (22) objectives rank the three least important on the basis of what has happened in your classroom this year. (place the letter representing the selected objective in the space provided).

Rank	Objective
Least Important	
2nd Least Important	
3rd Least Important	

TEACHER'S EVALUATION OF CLASSROOM SITUATION

(T.E.C.S.)

SCHOOL NO. \_\_\_\_\_

DATE \_\_\_\_\_

TEACHER NO. \_\_\_\_\_

RESEARCHER \_\_\_\_\_

---

This questionnaire contains nineteen (19) questions about your present classroom environment.

While some factual information is requested, you will be asked to share your opinions and feelings about certain aspects of your class/unit setting.

NOTE:

Please answer every question.

You will probably need about twenty (20) minutes to complete this questionnaire.

TEACHER'S EVALUATION OF CLASSROOM SITUATION

(T.E.C.S.)

1. How do you rate your satisfaction in teaching in your present classroom environment? (tick the appropriate box)

COMMENTS

most unsatisfying

some satisfaction  
but not a great  
deal

moderately  
satisfying

satisfying on the  
whole but not  
fully

fully satisfying

2. On the average, how much time each week do you spend alone in teacher preparation?

\_\_\_\_\_ hours (approximately)

3. On the average, how much time each week do you spend planning with other teachers?

\_\_\_\_\_ hours (approximately)

4. Please tick the audio-visual teaching aids you are competent to operate alone.

overhead projector	_____	tape recorder	_____
radio	_____	listening post	_____
movie projector	_____	video tape recorder	_____
strip film projector	_____	slide projector	_____
T.V. receiver	_____	Other (please specify)	_____
record player	_____	.....	

5. Please tick the audio-visual teaching aids you use in teaching, at least 5 times a term.

overhead projector	_____	tape recorder	_____
radio	_____	listening post	_____
movie projector	_____	video tape recorder	_____
strip film projector	_____	slide projector	_____
T.V. receiver	_____	Other (please specify)	_____
record player	_____	.....	

6. Approximately what number of children in your class or 'home' group\* are competent in the use of audio-visual aids?  
(place the number of children in the appropriate space)

overhead projector	_____	tape recorder	_____
radio	_____	listening post	_____
movie projector	_____	video tape recorder	_____
strip film projector	_____	slide projector	_____
T.V. receiver	_____	Other (please specify)	_____
record player	_____	.....	

\* If you are in an open-space unit and do not have a 'home' group, please indicate the total number of children in your unit

\_\_\_\_\_ and use this number to estimate percentages for question 7 and 18.

7. Indicate the approximate percentage of children in your class or 'home' group for each of the four spaces on the scales below for each category:

Approximate Percentage

	<u>Always</u>	<u>Frequently</u>	<u>Seldom</u>	<u>Never</u>	=	<u>Total</u>
(a) do as they are told	_____	_____	_____	_____	=	100%
(b) say what they think and feel	_____	_____	_____	_____	=	100%
(c) go to the toilet without seeking teacher permission	_____	_____	_____	_____	=	100%
(d) argue with other children	_____	_____	_____	_____	=	100%
(e) move about without teacher permission	_____	_____	_____	_____	=	100%
(f) do what they are interested in	_____	_____	_____	_____	=	100%
(g) line up to enter the class/unit	_____	_____	_____	_____	=	100%
(h) feel accepted and liked by other children in the class/unit	_____	_____	_____	_____	=	100%
(i) fight with other children in the class/unit	_____	_____	_____	_____	=	100%
(j) decide where they should sit in the class/unit	_____	_____	_____	_____	=	100%
(k) enjoy being in your class/unit	_____	_____	_____	_____	=	100%

8. How well do you feel you know the children in your class or 'home' group? (Tick the appropriate box)

COMMENTS

- Not at all
- Vaguely
- Fairly well
- Very closely

9. How well do you feel you know the parents of the children in your class or home' group? (Tick the appropriate box)

COMMENTS

- Not at all
- Vaguely
- Fairly well
- Very closely

10. Are you content with the teaching materials you have?

(Tick the appropriate box)

- Yes
- No

If 'No' what other additional teaching materials do you feel are essential?

.....  
.....

11. Rate the time your children spend in the ways listed below; and evaluate their feasibility for your physical setting.

Time spent by children

Feasibility (or appropriateness) in your class/unit environment

<u>Little</u>		<u>A Lot</u>				<u>Low</u>		<u>High</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(a)	doing individual work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(b)	working in groups of up to 10 children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(c)	working in groups of between 10 and 20 children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(d)	working as a whole class-size group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(e)	working in groups greater than single-class size.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Do you attempt to programme for individual differences?

(Tick the appropriate Box)

Yes

No

If 'Yes', please briefly indicate the ways.

.....

.....

.....

.....

.....

13. While at school, how many other adults do children in your class or 'home' group meet each week? (Indicate an approximate average)

---

14. While at school, with how many other teachers do children in your class or 'home' group spend more than two (2) hours per week?

---

15. How is your teacher-talk distributed amongst the children? (Tick the appropriate box for each category)

	Little			A Lot	
(a) to individuals	<input type="checkbox"/>				
(b) to groups of up to 10 children	<input type="checkbox"/>				
(c) to groups between 10 and 20 children	<input type="checkbox"/>				
(d) to a whole class-size group	<input type="checkbox"/>				
(e) to a group greater than single-class size.	<input type="checkbox"/>				

16. Describe the noise level in your class/unit. (Tick the appropriate box)

High

Moderate

Low

COMMENTS

17. How appropriate is the noise level to your class/unit setting?

Satisfactory

Unsatisfactory

COMMENTS

18. Rate the children in your class or 'home' group against the categories listed below. Indicate the approximate percentage of children who would fall in each of the three spaces on the scales for each category.

	<u>Approximate Percentage</u>			=	<u>Total</u>
	<u>Low</u>	<u>Moderate</u>	<u>High</u>		
(a) Display a zest for learning.	___	___	___	=	100%
(b) Show initiative in learning situations.	___	___	___	=	100%
(c) Show adaptability in various class/unit activities.	___	___	___	=	100%
(d) Co-operation with class/unit peers.	___	___	___	=	100%
(e) Shows the capacity to make decisions in the class/unit.	___	___	___	=	100%
(f) Display self-discipline in the class/unit	___	___	___	=	100%

19. Thank you for answering this questionnaire. Please take this opportunity to comment on the questionnaire or the suitability or otherwise of teaching in your present class/unit environment OR any other information which you think might give us a better 'glimpse' of your class/unit situation.

GENERAL INFORMATION SHEET

1. NAME .....2. AGE .....

3. SEX .....

4. FATHER'S OCCUPATION .....

5. MOTHER'S OCCUPATION .....

6. NUMBER OF BROTHERS ..... NAMES .....  
.....  
.....

7. NUMBER OF SISTERS ..... NAMES .....  
.....  
.....

8. If your brothers or sisters are older - place an X beside their name?

OR

If younger - place a 'Y' beside their name.

9. Have you been in this class all year?

Yes

No

If no, when did you enter?  
\_\_\_\_\_

10. If you are in an open-space unit, how many years have you been in one?

Less than 1 year \_\_\_\_\_  
1 year \_\_\_\_\_  
2 years \_\_\_\_\_  
3 years or more \_\_\_\_\_

OBSERVATION OF CLASSROOM SITUATION

Student Observation Form

No. of Teachers in class/unit \_\_\_\_\_  
No. of Students in class/unit \_\_\_\_\_  
Grade Level of student \_\_\_\_\_  
Age of Student \_\_\_\_\_  
Sex of Student \_\_\_\_\_

Date \_\_\_\_\_  
Time \_\_\_\_\_  
School No \_\_\_\_\_  
Observation No \_\_\_\_\_  
Observer \_\_\_\_\_

---

---

(observation every minute for 5 minutes)

LOCATION

- (a) alone
- (b) in a group of the same sex }but working alone
- (c) in a mixed group
- (d) in a group of the same sex }and working with part of the group
- (e) in a mixed group
- (f) in a group of the same sex }and working with all of the group
- (g) in a mixed group

\_\_\_\_\_                      \_\_\_\_\_                      \_\_\_\_\_                      \_\_\_\_\_                      \_\_\_\_\_  
1                                      2                                      3                                      4                                      5  
(minutes)

---

---

(observation every 20 seconds for 5 minutes)

CONTACTS

- code: P - personal, very close contact or teaching.  
C - conventional, 2 to 3 feet away, ordinary conversational distance.  
D - distant, several or more feet away.



OBSERVATION OF CLASS-ROOM SITUATION

GENERAL

OBSERVATION FORM

No. of Teachers in class/unit \_\_\_\_\_  
No. of Students in class/unit \_\_\_\_\_  
No. of Adults (other than teachers) \_\_\_\_\_  
Grade Levels (or ages) \_\_\_\_\_

Date \_\_\_\_\_  
Time \_\_\_\_\_  
School No. \_\_\_\_\_  
Observer \_\_\_\_\_

(Observation before and after each student observation.)

1. Atmosphere: (a) Formal (b) Neutral (c) Informal  
Pre \_\_\_\_\_  
Post 1. 2. 3. 4. 5.

(Student observed)

2. Noise Level: (a) Low (b) Medium (c) High  
Pre \_\_\_\_\_  
Post 1. 2. 3. 4. 5.

(Student observed)

3. Movement: (a) None (b) Moderate (c) Considerable  
Pre \_\_\_\_\_  
Post 1. 2. 3. 4. 5.

(Student observed)

4. Size of largest grouping: (a) 1 : (b) 2-3 : (c) 4-8 : (d) 9-12 :  
(e) 13-20 : (f) 21-35 : (g) whole class-size groups : (h) 36 plus.

Pre \_\_\_\_\_  
Post 1. 2. 3. 4. 5.

(Student observed)

5. Size of most frequent grouping: (a) 1 : (b) 2-3 : (c) 4-8 :  
(d) 9-12 : (e) 13-20 : (f) 21-35 : (g) whole class-size groups :  
(h) 36 plus.

Pre \_\_\_\_\_  
Post 1. 2. 3. 4. 5.

(Student observed)

HOW DO YOU FEEL?

In the next few minutes you will be given a chance to tell us how you feel about several ideas.

Under each idea to be looked at you will find sets of opposite words. You are to place a tick on the space closest to the word which best tells your feeling.

LOOK AT THIS EXAMPLE:

If your feeling is VERY CLOSE to one word, you should place your tick on one of the spaces as follows:

good : \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: bad

OR

good \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: : bad

If your feeling is CLOSE (but not very close) place your tick as follows:

good \_\_\_: : \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: bad

OR

good \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: : \_\_\_: bad

If your feeling seems NOT AT ALL CLOSE place your tick as follows:

good \_\_\_\_: \_\_\_\_: : \_\_\_\_: \_\_\_\_: \_\_\_\_: \_\_\_\_: bad

OR

good \_\_\_\_: \_\_\_\_: \_\_\_\_: \_\_\_\_: : \_\_\_\_: \_\_\_\_: bad

If you have no feelings one way or the other, then you should place your tick in the middle space as follows:

good \_\_\_\_: \_\_\_\_: : \_\_\_\_: \_\_\_\_: \_\_\_\_: \_\_\_\_: bad

PLEASE NOTE:

1. Place your ticks IN THE MIDDLE OF THE SPACES not in the boundaries.

good \_\_\_\_: \_\_\_\_: : \_\_\_\_: : \_\_\_\_: \_\_\_\_: bad

this                      not this

2. Be sure you tick one space only for each pair of words - DO NOT LEAVE OUT ANY.

Work fairly quickly. Do not worry or puzzle over any pair of words. It is your first "feelings" we want.

- A. MY OPEN-SPACE UNIT
- a. Kind      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Cruel
- b. Awful     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Nice
- c. Dark      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bright
- d. Narrow    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Wide
- e. Hard      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft
- f. Bad       \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Good
- g. Fast      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow
- h. Small     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Large
- i. Strong    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak
- j. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly

- B. MY OPEN-SPACE TEACHERS
- a. Hard      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft
- b. Small     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Large
- c. Strong    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak
- d. Wide      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Narrow
- e. Bright    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Dark
- f. Good      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bad
- g. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly
- h. Fast      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow
- i. Nice      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Awful
- j. Cruel     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Kind

C. MYSELF

- a. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly
- b. Nice \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Awful
- c. Hard \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft
- d. Kind \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Cruel
- e. Strong \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak
- f. Large \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Small
- g. Bad \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Good
- h. Wide \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Narrow
- i. Dark \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bright
- j. Slow \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Fast

D. MY SCHOOL SUBJECTS

- a. Cruel \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Kind
- b. Soft \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Hard
- c. Awful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Nice
- d. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly
- e. Fast \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow
- f. Dark \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bright
- g. Bad \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Good
- h. Large \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Small
- i. Wide \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Narrow
- j. Strong \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak

E.

OTHER MEMBERS OF MY OPEN SPACE UNIT

- a. Fast        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow
- b. Kind        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Cruel
- c. Ugly        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Beautiful
- d. Good        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bad
- e. Nice        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Awful
- f. Large        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Small
- g. Hard        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft
- h. Bright       \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Dark
- i. Weak        \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Strong
- j. Narrow       \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Wide

STUDENT EVALUATION OF CLASSROOM SITUATION

(S.E.C.S.)

In the next few minutes you will be given a chance to tell us how you feel about sixteen (16) different sentences.

For each sentence there are four different spaces. You are to place a tick on the space which best tells how you feel about that sentence.

LOOK AT THIS EXAMPLE

If you think the sentence is VERY CLOSE to how you feel, then place your tick in the space

✓ I agree a lot

If you think the sentence is CLOSE (but not very close) to how you feel, then place your tick in the space

✓ I agree a little bit

If you think the sentence is NOT VERY CLOSE to how you feel, then place your tick in the space

✓ I disagree a little bit

If you think the sentence is NOT AT ALL CLOSE to how you feel, then place your tick in the space

✓ I disagree a lot

NOTE

Work fairly quickly.

Place one tick only for each sentence.

It is your first feelings we want.

STUDENT EVALUATION OF CLASSROOM SITUATION

(S.E.C.S.)

Tick one space for each statement.

1. I feel accepted and liked by the other children in this class/unit.

- \_\_\_\_\_ I agree a lot.
- \_\_\_\_\_ I agree a little bit.
- \_\_\_\_\_ I disagree a little bit.
- \_\_\_\_\_ I disagree a lot.

2. I enjoy the things I do in this class/unit.

- \_\_\_\_\_ I agree a lot.
- \_\_\_\_\_ I agree a little bit.
- \_\_\_\_\_ I disagree a little bit.
- \_\_\_\_\_ I disagree a lot.

3. I have a chance to have a lot of friends in this class/unit.

- \_\_\_\_\_ I agree a lot.
- \_\_\_\_\_ I agree a little bit.
- \_\_\_\_\_ I disagree a little bit.
- \_\_\_\_\_ I disagree a lot.

4. I feel like I'm learning a lot about school subjects in this class-unit.

- \_\_\_\_\_ I agree a lot.
- \_\_\_\_\_ I agree a little bit.
- \_\_\_\_\_ I disagree a little bit.
- \_\_\_\_\_ I disagree a lot.

5. I have a chance to say what I think and feel in this class/unit.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

6. I feel like I'm learning a lot about myself in this class/unit.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

7. My teacher makes most of the decisions in this class/unit.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

8. I do things in this class/unit that I am interested in doing.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

9. I like the idea of having more than one teacher.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit  
\_\_\_\_\_ I disagree a lot.

10. I use the audio-visual equipment (such as, tape-recorders and strip projectors) a great deal in this class/unit.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

11. I find my work in the class/unit sometimes hard but usually interesting.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

12. I feel my class/unit is a better group, just because I am in it.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

13. I enjoy the fun and difficulties of working with the other children in my class/unit.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

14. I get many ideas for hobbies from my class/unit.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

15. I feel I learn a lot about how to work with others outside school by sharing in the life of my class/unit.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

16. I see all the things I learn in my class/unit as helping me to earn a living when I grow up.

- \_\_\_\_\_ I agree a lot.  
\_\_\_\_\_ I agree a little bit.  
\_\_\_\_\_ I disagree a little bit.  
\_\_\_\_\_ I disagree a lot.

HOW DO YOU FEEL?

In the next few minutes you will be given a chance to tell us how you feel about several ideas.

Under each idea to be looked at you will find sets of opposite words. You are to place a tick on the space closest to the word which best tells your feeling.

LOOK AT THIS EXAMPLE:

If your feeling is VERY CLOSE to one word, you should place your tick on one of the spaces as follows:

good : \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_:  bad

OR

good \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: :  bad

If your feeling is CLOSE (but not very close) place your tick as follows:

good \_\_\_: : \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_:  bad

OR

good \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: : :  bad

If your feeling seems NOT AT ALL CLOSE place your tick as follows:

good \_\_\_\_: \_\_\_\_: ✓: \_\_\_\_: \_\_\_\_: \_\_\_\_: \_\_\_\_: bad

OR

good \_\_\_\_: \_\_\_\_: \_\_\_\_: \_\_\_\_: ✓: \_\_\_\_: \_\_\_\_: bad

If you have no feelings one way or the other, then you should place your tick in the middle space as follows:

good \_\_\_\_: \_\_\_\_: : \_\_\_\_: ✓: : \_\_\_\_: \_\_\_\_: bad

PLEASE NOTE:

1. Place your ticks IN THE MIDDLE OF THE SPACES not in the boundaries.

good \_\_\_\_: \_\_\_\_: <sup>this</sup> ✓: \_\_\_\_: <sup>not this</sup> ✓: \_\_\_\_: \_\_\_\_: bad

2. Be sure you tick one space only for each pair of words - DO NOT LEAVE OUT ANY.

Work fairly quickly. Do not worry or puzzle over any pair of words. It is your first "feelings" we want.

A. MY CLASSROOM

- a. Kind     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Cruel  
 b. Awful    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Nice  
 c. Dark     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bright  
 d. Narrow   \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Wide  
 e. Hard     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft  
 f. Bad      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Good  
 g. Fast     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow  
 h. Small    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Large  
 i. Strong    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak  
 j. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly

B. MY TEACHER

- a. Hard     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft  
 b. Small    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Large  
 c. Strong    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak  
 d. Wide     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Narrow  
 e. Bright    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Dark  
 f. Good     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bad  
 g. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly  
 h. Fast     \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow  
 i. Nice      \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Awful  
 j. Cruel    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Kind

C. MYSELF

- a. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly
- b. Nice \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Awful
- c. Hard \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft
- d. Kind \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Cruel
- e. Strong \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak
- f. Large \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Small
- g. Bad \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Good
- h. Wide \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Narrow
- i. Dark \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bright
- j. Slow \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Fast

D. MY SCHOOL SUBJECTS

- a. Cruel \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Kind
- b. Soft \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Hard
- c. Awful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Nice
- d. Beautiful \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Ugly
- e. Fast \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow
- f. Dark \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bright
- g. Bad \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Good
- h. Large \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Small
- i. Wide \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Narrow
- j. Strong \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Weak

- E. OTHER MEMBERS OF MY CLASS
- a. Fast    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Slow
- b. Kind    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Cruel
- c. Ugly    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Beautiful
- d. Good    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Bad
- e. Nice    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Awful
- f. Large    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Small
- g. Hard    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Soft
- h. Bright    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Dark
- i. Weak    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Strong
- j. Narrow    \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: \_\_\_: Wide

BIBLIOGRAPHY

NOTE : THIS LIST CONTAINS ALL MATERIALS INITIALLY REFERRED TO IN PREPARATION OF THE THESIS, BUT NOT NECESSARILY USED IN THE FINAL STUDY.

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(I)	THE PROCESS OF EDUCATION Revisited	Jerome S. Bruner	Phi Delta Kappan		September 1971
(II)	Education Canada "OPEN PLAN SCHOOLS :Time for a peek at Lady Godiva" (pp 2-7)	D. Carl Anderson			June 1970
(III)	A Comparison of the Perceptions of Elementary School Children in Open Area & Self Con- tained Classrooms in British Columbia	R.E. Myers	Institute of Research & Development in Education (Dodd, Mead)	New York	1971
(IV)	Primary School Libraries Guide I Objectives & Standards	Director of Primary Education	Education Dept. of Victoria	Melbourne	1973

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(V)	Education & Training:- New education - New design	David Medd			May 1970
(VI)	S.A. Teachers Journal	Several articles	& volumes	Adelaide	1971-1975
(VII)	Primary Division Broadsheet	Several	Department of Production South Australian College of external studies	Adelaide	1972-1975
(VIII)	Progress Bulletins No's 1-9 Open Planned Secondary Schools	Editorial Committee	Published on behalf of Education Department of S.A. By Civil & Civic	Adelaide	1973-1974
(IX)	California Journal of Education Research Vol. XXIII No. 3. Team Teaching Schools			Los Angeles	May 1972
(X)	Etobicoke Education Centre	David K.Lansdowne & Alan J. Ross	Canadian Architect - dossier		June 1970

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(XI)	Connotations of Seating Arrangements	Nancy Felipe Russo	Cornell University - Abstract		June 1974
(XII)	Guide for Planning School Facilities	Department of Education	State of New Jersey	New Jersey	1967
(XIII)	Education News - Vol. 15. No. 6	Department of Education	Australian Government Publications		1976
(XIV)	Educational Priority Vol. 4 - The West Riding Project	ed. by George Smith. Department of Education & Science & Social Science Research Council	H.M.S.O.		1975
(XV)	An Introduction to Lifelong Education	Paul Lengrand	H.M.S.O.		1975
(XVI)	Education Vol.19 No. 3 "A New Design for Secondary Schools"		N.Z. Department of Education		June 1970
(XVII)	Aspects of Open Space Teaching in South Australia	Ian McD. Mitchell	Education Department of S.A.	Adelaide	July 1973

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(XVIII)	People in Schools: an attitude to design	Peter Falconer & Partners	R.I.B.A.J.	London	June 1968
(XIX)	Building Study: Hampton County Infants School	Manning, Clamp & Partners	The A. J. Information Library	London	30 July 1969
(XX)	Schools (p 1418-1421)	Alan Diprose	The Architects Journal	London	10 June 1970
(XXI)	Building Study: Secondary School	Leicestershire County Architect	The A. J. Information Library	London	4 August 1971
(XXII)	Open Plan: A Postscript	Douglas Smith	The Canadian Architect	Ontario	October 1970
(XXIII)	Listening to Architecture - Harvard Education Review	James S.Ackerman	Longfellow, Hall	Cambridge, Mass.	1969
(XXIV)	Open Plan Schools: "Time for a Peek at Tody Godiva"	Education Canada			June 1970
(XXV)	Social Psychological Aspects of School Building Design	Louis M. Smith & Pat M. Keith	John Wiley & Son	Washington	1971

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(XXVI)	A comparison of Instructional Practises in Class-rooms of Different Design	Barney Lewis Kyzar	Dissertation for Doctorate of Education	University of Texas	1961
(XXVII)	An Evolving Learning Space - Harvard Education Review	Robert Goodman	Longfellow, Hall	Cambridge, Mass,	1969
(XXVIII)	Creative Learning & Teaching	E.P. Torrance & R.E. Myers	Dodd, Mead	New York	1970
(XXIX)	Primary School Libraries Guide I Objectives and Standards	Education Department of Victoria	Publications Branch, Education Department of Victoria	Victoria, Australia	1973
(XXX)	Standards for Secondary School Libraries	Commonwealth Secondary Schools Library Committee	Australian Government Publishing Service	Canberra	1971
(XXXI)	Media for Discovery	Hans Moller	Maclean-Hunter	Toronto	1970
(XXXII)	Student Teacher Reactions to Training in Team Teaching Schools	June Gallessich and Ira Iscoc	California Journal of Educational Research		May 1972

TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(XXXIII) Cowandilla Primary School - Architecture in Australia	S.A. Public Buildings Department		Adelaide	June 1971
(XXXIV) A New Approach to School Building in S.A.	Leslie Dodd	'Abstract'	Adelaide	1971
(XXXV) "A Visit to the School without Walls: Two Impressions" Phi Delta Kappan Vol. 51 No. 9	James D. Greenberg & Robert E. Roush			May 1970
(XXXVI) "Inside the Flexible Unit: Throwing a Little Light on the First Few Weeks"	Teachers of the Burnside Open Plan Unit	'An Abstract'	Adelaide	1971
(XXXVII) Schools without Walls	E.F.L. Report	Educational Facilities Laboratories	N.Y. U.S.A.	1969
(XXXVIII) One Room School House 1972 Style	Joy E. Green	Article from School Management	N.Y. U.S.A.	April 1971
(XXXIX) Furniture & Furnishings for the Open Plan		Article from School Management	N.Y. U.S.A.	May 1971

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(XL)	Educational Leadership Vol. 28 No. 5 "Quest for an Alternative"	Lawrence McNally & Glenn Fleming	Article from E.L.	N.Y. U.S.A.	February 1971
(XLI)	Education Leadership Vol. 28 No. 5 -The "Open Space" Plan	I. Ezra Staples	Article from E.L.	N.Y. U.S.A.	February 1971
(XLII)	Queensland Teachers Journal - Vol. 76 No. 2. Multi-Area Teaching Spaces come to Queensland	U.S. Zagami		Brisbane	March 1971
(XLIII)	Wide Open for Learning	R. Cluff Wing & Patricia H. Mack	Abstract from American Education	New Hampshire U.S.A.	November 1970
(XLIV)	The Open Classroom	Herbert Kohl	Vintage	N.Y. U.S.A.	1970
(XLV)	Crisis in The Classroom	Charles Silberman	Random House	N.Y. U.S.A.	1970
(XLVI)	The Open Classroom: Humanizing the Coldness of Public Places	Arthur J. Tobier	The Centre Forum	U.S.A.	May 1969

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(XLVII)	The Architects Journal (p 1377-1378) - New Environment for Teaching	Abstracts		U.K.	December 1968
(XLVIII)	Schools Without Subjects	Beecher H. Harris	Abstract from Educational Leadership	California	February 1972
(XLIX)	School Environment Study Memorandum No. 2 "A Brief Guide For Teachers Toward The Utilization of the Concept of Open Space as an Aspect of the Instructional Individualisation"	Larry E. Frase	E.F.L. Inc.	Stanford University	January 1972
(L)	Progressive Architecture "Education Buildings	Various	Reinhold Publishing	N.Y. U.S.A.	May 1974
(LI)	Progressive Architecture "Schools"	Various	Reinhold Publishing Corporation	N.Y. U.S.A.	April 1968
(LII)	Architectural Record "Schools"	Various	McGraw-Hill	N.Y. U.S.A.	August 1972

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
( LIIII )	E.F.L. Report Middle Schools	Judith Murphy	E.F.L. Inc.	N.Y. U.S.A.	March 1968
(LIV)	Report on Over- seas Tour "Observations of a Study Tour"	B.J. Kearny	Education Department of S.A.	Adelaide	July 1971
(LV)	Overseas Study Tour "Impressions of Secondary Education Abroad"	K.E. Barter	Education Department of S.A.	Adelaide	1968
(LVI)	Elementary School Journal Vol. 76 No. 3 "Open Education from Bristol to the U.S.A."	Jerome E. DeBruin		U.S.A.	December 1975
(LVII)	Designing Education for Tomorrow's Cities	M. D. Fantani	Holt	N.Y. U.S.A.	1970
(LVIII)	In Our Experience: the Changing Schools of Leicestershire	S.C. Mason	Longmans	London	1970
(LIX)	Guide to Better Schools (focus on change)	J.L. Trump	Rand McNally	Chicago	1968

	TITLE	AUTHOR	PUBLISHER	PLACE	DATE
(LX)	Primary Division Broadhseet No. 3 "Education 1992"	Various	Education Department of S.A.	Adelaide	1972
(LXI)	Community Partici- pation - Somewhere to go	Various	Education Department of S.A.	Adelaide	January 1974
(LXII)	Places and things for experimental schools	E.F.L.	E.F.L. Publications	New York	February 1972

QUOTATION REFERENCES

- (1) "One Student ..... world of ideas"  
pp 130. Progressive Architecture, April, 1968.
- (2) "One teacher ..... knee to knee"  
P.A., April 1968.
- (3) "Fifty to sixty ..... on the blackboard"  
P.A., April 1968.
- (4) "Much maligned eggcrate"  
Architectural Design, May 1968
- (5) "Television mast ..... environment as the school"  
pp 1 - paper on "Educational Development Leading to Open  
Plan Schools"
- (6) "Learning takes ..... his environment "  
pp 1 paper on "Educational Development Leading to Open  
Plan Schools.
- (7) "A schoolhouse ..... little boxes called classrooms"  
SAMSKAP, Sweden - Development In Building for the Changing  
Schools.
- (8) "The very architecture ..... groups exchange boxes".  
People in Schools : an attitude to design  
Peter Falconer and Partners
- (9) "An organisation of ..... within the overall framework"  
People in Schools : an attitude to design  
Peter Falconer and Partners.

27.0 ABSTRACT

27.1 This Thesis seeks to examine the evidence that supports the belief that open space designs for schools increases the range of educational experiences available to children and positively contributes to their ability to learn from the experiences when presented in this environment.

No attempt is made to quantify the differences between the learning opportunities available in these environments and those of more traditional environment.

The Thesis has been prepared with information obtained from reports submitted by, and personal discussions with groups of teachers and other officers expert in the various aspects of schooling, also the writer has worked in liaison with other architects and consultants concerned in similar fields.

From some basic assumptions, the design implications and various papers/reports (prepared by different personnel officers of the Education Department), notional model plans were produced.

The intention of the Thesis as it now stands is to represent a consensus of informed opinion (written and spoken) at this point of time.

The notional model plans (and descriptions)

- a) Section 20.0 "The Infant School" diagram page 90.a.
- b) Section 21.0 "The Primary School" diagram page 93.a.
- c) Section 22.0 "The Secondary School" diagram page 95.a, 95.b.

are a culmination of the Thesis, such that at a later stage it will be helpful in explaining the teaching concepts underlying the design of the proposed new school buildings, and to take full advantage of the opportunities

created by the new designs.

The findings of this study which examines the relation of architectural planning to emerging educational needs are not inconsistent with the study of G.S. Fitzpatrick and others which was founded in part by the Australian Advisory Committee on Research and Development in Education to examine the obverse proposition of the outcomes of Education when conducted in the light of architectural environment.

(reference: THE AUSTRALIAN OPEN AREA SCHOOLS PROJECT  
TECHNICAL REPORTS NO. 1-5  
Education Department of Western Australia).

A statement by B. Keating and T.L. Zani, (Research Branch, Education Department of Western Australia, 1976):

It is not always easy to identify and locate definitive evidence of an educational rationale to support the introduction of open architecture. However, Departmental statements on the new design contain some assumptions and assertions about the expected advantages of these new schools.

The above can be applied conversely to open architecture. The perceived relationship between open architecture and individual differences was made clear by Hamilton (1972) who, as Deputy Director of General Education in Queensland, stated:

.....in order to cater for individual needs, interests and capacities, maximum flexibility of space, time and materials is required.  
viz Section 23 of the Thesis — "one of the clusters is shown arranged in conventional .....  
..the variety of instruction it will have to house through its lifetime."

In providing a teaching environment as described (in relation to diagrams and photographs) from Section 20 through to Section 23, it is endeavoured to allow for teachers fully competent in a self contained classroom situation who are unable to realise their teaching goals in the open school. Although it was hard to assess the numbers of these teachers in the profession, it appears, from personal contact during interviews, that they constitute a small proportion of the teaching force, and thus must be catered for, (within the system and within the design parameters of a school plan).

The above also applies to the pupils.

The schematic proposals of Sections 20 to 23 of this Thesis are such that they do not represent an irreversible push forward

viz Section 19.0, page 89 — "The diagrams and plans ..  
..... say that teaching should be done this way or that forever in the future."

The plans are such that any space can always be partitioned permanently with minimum disruption to suit the situation or needs at any one time.

Comments of teachers (generally well disposed to open space) were taken into account, provision for these has been allowed for in the model diagrams e.g. more pin up boards, larger teaching spaces, less window space, extra cupboard space, more sensible location of toilets. At all times the Sections 18-24 have been directed towards evolving an Architectural Model Plan to be used as a basis for those planning school facilities. It is intended to stimulate planners to achieve school environments that are interesting and workable in an architectural and educational field.

It must be stressed that it has never been intended that this Thesis be an empirical study on education, it acknowledges that users' views are important, and by asking to comment on their new classroom environment, the

open space unit, useful feedback was generated for the writer to consider. On this basis, an independent "action research" approach was adopted, where new ideas were discussed and evaluated (Section 15, 16, 17) and from this the model plans developed.

While the plans thus evolved may serve as a model, they will not be entirely effective unless adapted to a particular situation (as stated earlier in this Thesis - it is intended to stimulate planners to achieve a solution, not to give it!)

Through the development of the Thesis a pattern emerged from comments that there was a focus most clearly upon the degree of architectural openness.

Teachers expressed a desire for greater flexibility within the open unit area; thus in Section 21, diagram page 93 a and written proposal pages 93-94, it has been proposed to accommodate each requirement in the plan so that one can make it relevant to himself (his and others' needs) according to his own nature.

- 27.2 By now (1978-79), the open plan for schools - especially infant and primary schools - is nothing new.

Developed in the mid 1960's in South Australia, and at first considered as radical approach to planning as it was to education, the open plan has since been used by all states throughout Australia to the point of becoming almost commonplace among new schools.

Although its success has been mixed, the open plan school has opened many minds to the possibility of using school space imaginatively and innovatively, and to thinking of it as a means to put into practice what is known - through the studies of Piaget and others - of the learning process, (refer Section 5-7 (pp 14-24)).

What the open plan has done to the physical aspect of the school was to effect the first real change in its building since the one room school house became the multi-room educational facility, e.g. Section 2, diagrams 6a, 6b, 6c "change and more change".

What it did to the school curriculum was to open it up to a variety of ideas and theories which have had more ready acceptance than before.

With the generation of 'evaluation as feedback' in the form of answers to questionnaires prepared by the Schools Commission, Education Department, research bodies, teachers, administrators and architects and parents; the open plan itself is undergoing changes, becoming more sophisticated in its reflection of needs and methods. Where once the open plan meant a great sweep of open loft-type space without identifying mark or guidepost (e.g. the first open plan six teacher units, similar to those built in the early 1970's at Campbelltown Primary School, Lockleys Primary School etc.), today's (1978) open space tends increasingly to be defined by some architectural planning device such as the alcove plan, which in no way impairs the fluidity of the space relationships, or by colour and graphics.

A sense of place is important especially for the young. The design models evolved in 1975 in this Thesis and shown and discussed in Sections 20 - 23, recommended the above, which has now been justified when an inspection of new school plans is carried out (refer News sheet, Australian Schools 2, September, 1978, prepared by Schools Commission).

The success of the open plan depends on how it is used. How open space is used is often a problem, and has been found to be the cause of what failures there have been in open plan schools. As more open plan schools were built, the problem was gradually overcome, as more and more teachers came into contact with the

"different teaching space" before they actually moved into new open plan buildings. The freer environment for learning means also a freer environment for teaching, but understanding that environment in its physical state is basic to using it to its full potential (refer Section 15.2 page 51 - Reaction to Training in Team Teaching Schools).

In Section 24 of this Thesis, the idea of schools used as community facilities was mooted/projected along with an "open campus" situation.

Present trends now indicate this has, and is happening. Originally only the library and the gymnasium were used after hours by the community, but now with the involvement of the community college; classrooms, laboratories, domestic science rooms, etc. are being used at existing schools after the 'normal school day' has been completed (research in this field has recently been completed\*)

Although no such new school has yet been built, some existing schools have had extensive alterations and extensions carried out to cater for this increasing need/trend (old Thebarton Girls' School), and presently a number of such schools are under construction (eg. Angle Park, Thebarton, Gilles Plains).

The community school, I believe, should be (and is) designed for people as distinguished from just children; the place of education will be the gathering place for persons of all ages who desire to learn from each other in contrast to the schools we have known which appear to have been designed defensively against the destructive impulse of the occupants.

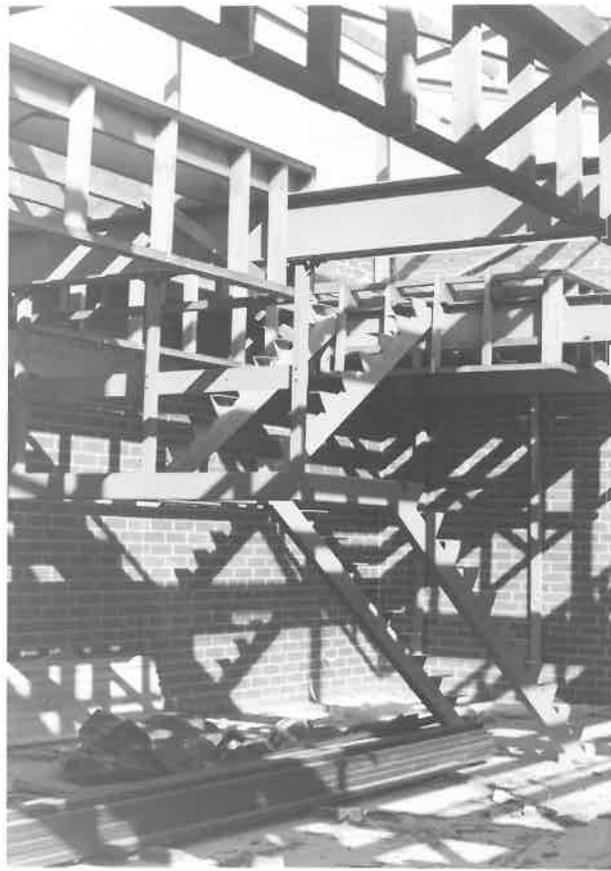
With the thought - if new schools are designed imaginatively and innovatively and with 'high expectations of their occupants', then the new schools will trust the occupants to rise to our expectations of them.

\* COMMUNITY INVOLVEMENT IN SCHOOLS

A review of fifteen school-based projects funded by the Innovations Program of the Schools Commission. T.M. Beck and C.G. Goodridge.

A study sponsored by Western Australian Innovations Committee of the Schools Commission in co-operation with the Education Department of Western Australia, 1978.

GENERAL PHOTOS  
O'SULLIVAN BEACH - GOODWOOD SCHOOLS



GOODWOOD P/S



O'SULLIVAN BEACH I/S

