EDUCATIONAL BUILDINGS
OCCASIONAL PAPER No. 7

GUIDELINES FOR THE ESTABLISHMENT OF PRIMARY SCHOOLS IN HIGH-RISE FLATS IN MALAYSIA

UNESCO-AGFUND
REGIONAL PROJECT 522 RAS 10
DEVELOPMENT OF EDUCATIONAL FACILITIES IN ASIA AND THE PACIFIC

By The Educational Planning and Research Division
Ministry of Education
Malaysia

UNESCO 1995
PREFACE

Planning the location of schools is among the task entrusted to the Educational Planning and Research Division, Ministry of Education (EPRD). One aspect of this task is the building of schools in major towns and cities.

This will pose serious problems by the year 2000 as the major town/cities are expected to experience tremendous population growth. This will inevitably lead to an increase in housing demands and bring scarcity of land for housing and settlement.

The problem of scarcity of land may be overcome by building high-rise flats and condominiums but the building of schools is not one that can be overcome easily. The building of schools in high-rise flats have to meet specific educational requirements. Hence thorough planning is required.

The experience from two primary schools in high-rise flats, in Kuala Lumpur i.e. 3½ m.s. Cheras Road (built in 1987) and the other in the New Sentul Township (built in 1989) has provided us with an opportunity to evaluate the feasibility of building schools in high-rise flats. From the observations and studies done, it is clear that the present concept of schools in high-rise flats has to be re-evaluated. As a preliminary step, EPRD had organized a seminar-cum-workshop funded by UNESCO to discuss the matter. The objective of the seminar was to produce a guideline for the establishment of primary schools in high-rise flats in respect to its suitability for teaching and learning process.

The participants of the seminar were officials from various government agencies, whose combined expertise was instrumental in formulating the said guidelines. This guideline was formulated based on two main aspects i.e. policy and technical. It was narrowed down to these two areas after deliberating over various other aspects such as ownership, safety, engineering, design and landscaping. Two alternatives to the existing school set up in high-rise flats, have been proposed. However, the participants of the seminar agreed that the construction of schools in high-rise flats should only be as a last resort in overcoming the problem of schooling for the children living in high-rise flats.

As sponsors, EPRD and UNESCO wish to thank all the participants of the seminars for their efforts and contribution in making the seminar a success. It is hoped that this guideline will be beneficial to the children living in the flats and further contribute to the quality and excellence of education in our country.

Thank you.

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1. Objectives

The objective of this Seminar-cum-Workshop is to plan the building of primary schools in High-Rise flats.

This workshop, having considered:

♦ democratization and assesssibility of equal educational opportunities; and
♦ in line with the aspiration of achieving a loving and united community in the city

is aimed at producing guidelines for the construction of schools in High-Rise flats which incorporates the following aspects:

a) to provide adequate and comfortable facilities for teachers and students;
b) to create a conducive school environment;
c) to establish the required needs of education for effective teaching and learning;
d) to cultivate the spirit of co-operation and civic consciousness among students, teachers and parents;
e) to guide the students in facing the challenges of city life; and
f) the efforts of establishing schools as a social institution.

2. Background

2.1 Population Migration

Besides natural increases, other factors contributing towards population growth in big towns are economic growth and migration.

Cities in this country are expected to experience continued population growth. For example, the Kuala Lumpur City Hall forecasts a population of 2.2 million people by the year 2000.

Various housing projects have been undertaken to meet the ever increasing demands of the city population of different socio-economic status. Scarcity of land in the city has led to the building of High-Rise flats (4 floors and above) to enable the optimum use of land. The building of High-Rise flats is usually undertaken in areas of limited land and high population density. These flats are also affordable by the middle and lower income group.
2.2 Schools in High-Rise Flats

Generally, the high-rise flat dwellers are from the lower income group and have bigger families. Schools have to be built for their children. There have been cases where the nearby schools have not been able to accommodate the students from the flats. Thus schools have to be built in or within the flats. In the case of the flats in Kuala Lumpur, for e.g. the nearby schools were too crowded and parents faced problems sending their children to school elsewhere. Building schools within these flats appears to be a solution to the various problems stated above, especially transport. Scarcity of land is among the problems faced when a school is planned in the city especially, in areas nearby these High-Rise flats. Therefore the issue at hand is building schools within the vicinity of these flats.

Two schools in High-Rise flats were built in Cheras and in New Sentul Township without proper planning.

3. Research on Schooling in High-Rise Flats

3.1 Research by City Hall, Kuala Lumpur

Research on the structural plan of Kuala Lumpur in 1978, showed that 115,000 children attended 141 primary schools in the city (City Hall, Kuala Lumpur 1991). Using the standard scale of the Ministry of Education (MOE): 1,200 pupil to one school, it was found that not less than 19 per cent of schools at that time experienced over-crowding. Further 53.5 per cent of the schools had less than the minimum land space required (1.2 hectares or 3 acres) and 57 per cent did not have fields or recreational facilities.

3.2 Research by Ministry of Education

Two studies by EPRD, Ministry of Education, in 1987 and 1989 (EPRD, Ministry of Education 1989) showed that students in the 3½ mile Cheras Road Primary School (a school located in a High-Rise flat) faced various problems, namely:

a) Classroom space area did not conform to required standards i.e. for a class of 35 pupils, the required classroom space area is 30' x 25', however a classroom of 30' x 22' was provided for a class of 40 pupils.

This led to disorder in pupils' seating arrangements. The situation deteriorated in classes of high enrolment. There are pillars obstructing pupil's vision and sanitation pipes made of fragile material pass through the classroom. All this makes the classroom environment non-conducive for the teaching and learning process.

b) This school did not have a field and therefore sports activities, including the annual school sports were not held. The school uses public facilities for Physical Education and extra-co-curricula activities. The public courts are only available to the school when not in use by the public. At other times school activities have to be cancelled. Even the available facilities are not suitable for the primary school
pupils because they were designed for adults e.g. the netball and basketball posts are too high.

c) In 1989, there were only 12 toilets in the school. Based on the ratio of 1 unit to 80 pupils, the facilities available were not sufficient for a student population of 1480. Teacher also faced problems when using their toilets as they were situated in the classrooms. Teachers had to use the main classroom door to go to the toilets. This interrupted the teaching and learning process.

d) The staff room with an area of 20’ x 22’ was too small to accommodate 27 teachers. The situation was the same in the case of the school’s office (11’ x 16’) and the principal’s office (11’ x 22’). Moreover the office was situated under the staircase where there was much public movement.

e) According to the Department of Environment the noise level exceeded the acceptable range and this made it unsuitable for the teaching and learning process. The noise level registered by the Impulse Precision Band Level Meter in this school was between 62.8 to 70.85 decibels.

3.3 Research by the Department of Environment

The Department of Environment had made observations and inspections of two such schools i.e. Sri Perak Primary School in New Sentul Township and 3½ mile Cheras Road Primary School (Department of Environment, 1991). The findings were as follows:

a) The noisy environment was due to everyday activities by the general public, rubbish collection, cleaning of drains etc. School activities contributed to the further deterioration of the situation. The noise level registered around the Sri Perak Primary School in the New Sentul Township was between 55 to 65 dB(A) whereas the level in the 3½ mile, Cheras Road Primary School was between 60 to 75 dB(A). This distracted the students’ concentration.

b) Rubbish disposal and management by the general public, the authorities or the contractors left much to be desired. Cleaning the rubbish bins near the classrooms creates unbearable stench, again creating uncondusive environment for the students.

c) The size of the classroom (30’ x 20’ x 9’) was not suitable to accommodate a student population of 30 to 40. The pillars, sanitation pipes in the classrooms and the rubbish chutes located nearby made the situation worse. All these were distractions to the learning process.

d) As both of these schools do not have any sporting facilities, they have to share the public sport facilities. This causes a problem, especially, during the afternoon sessions when the facilities are used by both the students and the public at the same time. The situation also becomes noisy, when the public uses the sports facilities.

e) The classroom arrangements were subject to the space being made available in these high-rise flats. This posed administrative and security problems.
3.4 Research by the Science University of Malaysia

The University Sains Malaysia, having made observations on Sri Perak Primary School, Sentul, Kuala Lumpur in 1991 (Universiti Sains Malaysia, 1991) identified several problems faced by the school being located in high-rise flats:

a) Safety of school properties.

b) Noisy environment.

c) The students’ movements around the school are hindered by the traffic within the vicinity of the flats.

d) Students intermingle with the public during school hours, this posed security problems.

4. Justification

The building of primary schools in high-rise flats is a new concept in Malaysia. It appears to be among the solutions identified to overcome problems such as scarcity of land, the population growth and insensitive planning in regard to the needs for schools and education.

The building of schools in flats, is in line with efforts to place schools near the student’s home to ensure student attendance while saving cost and time travelled to school.

Even though the building of such schools might fulfil these requirements such efforts should not compromise the quality or objective of education. The facilities provided should be on par with the ordinary schools elsewhere.

As these schools are within the premises of the flats, most of the students’ activities and time is spent within the high-rise flats environment. Therefore the school design must take into consideration the ‘culture’ and lives of these flat dwellers.

5. Issues

5.1 Planning

a) There is no comprehensive policy on building schools in high-rise flats as yet.

b) There is no consideration for education, in the Kuala Lumpur structural plan, in planning the development of the Kuala Lumpur City.

c) There is no integrated plan which incorporates schools when high-rise flats are built.

d) The Kuala Lumpur City Hall has not been consistent on the conditions required for the building of schools in high-rise flats.

e) There is no rule to make a developer liable for compensation when failing to meet the requirements of building a school when erecting high-rise flats.

f) The areas allocated by the developer for the building of schools are usually either too small or not suitable.
g) The land and building title is never surrendered to the Ministry of Education.

h) Both the local council and the developer generally do not take into consideration the provisions for schools when developing highly populated areas. Schools built later are unable to provide adequate facilities for the students as required.

i) Up to date data on population is unavailable to be used as a basis for development planning, especially at the sectoral and sub-national level.

5.2 Structural

a) The present standard design for normal schools is not suitable to be used to build schools in high-rise flats. Conversely, such flats are not suitable to be converted into schools.

b) The Uniform Building By-laws 1984 has different provisions for houses and schools respectively.

c) The design and set up of high-rise flats is not conducive for the teaching and learning process i.e. the use of the ground floor for a school is not suitable. Such a school can only be a temporary measure.

5.3 Environment and Safety

a) The environment within and around the flats; the noise, stench and inadequate lighting is a distraction to the students. The students are unable to concentrate in class.

b) Lack of civic consciousness and co-operation among flat dwellers poses security problems to students, teachers and school property.

6. Guidelines for the Building of Primary Schools in High-Rise Flats – Policy Matters

a) Educational needs must be considered by the local councils as an important component in planning development. Thus its proper planning must also be addressed also.

b) Providing education may be the responsibility of the Federal Government but the state government and the local councils have equal responsibility to provide the necessary infrastructure. The Local Council Act, should therefore provide for such joint responsibilities.

c) Educational Planning must be an integral part when planning housing development projects. Figure 1 shows a model school in relation to the catchment areas.

d) In highly populated areas, e.g. in high-rise flats, schools should be built in the surrounding areas.
The local authorities must make it a policy to provide schools in every housing development project, in highly populated areas.

All local authorities must have a structural plan as a guideline to policy planning to ensure educational needs are taken into consideration in planning development. In highly populated areas, a local plan must be drawn up to determine the area and the number of schools required. Here the involvement of the MOE is crucial, to ensure the needs of education are properly addressed.

In cases where the Mandatory Plan (Structural and Local Plan) is unavailable then the local authorities must seek the approval of the MOE on the choice of site for schools before approving the overall development plan.
h) Where there is an increase in population in a particular area, the educational needs should be reconsidered in the light of this new development and the approval of the MOE must be sought.

i) The site reserved for schools in housing schemes must be suitable in terms of space area and location. Again the MOE's prior approval must be sought before a site is reserved for schools in housing schemes.

j) Where the population density is below the norm required for establishing schools, then it is proposed that the developer make monetary contribution to the local authorities or the State Government according to the set formula. The necessary amendments to the present laws must be made accordingly.

k) In cases where there is no school in a high-rise flat, the local authorities:

- Must set aside vacant land of 2.4 hectare, within the premise of the flats, for school and related facilities.
- In the event that such an area is unavailable, the local authorities must be able to turn to the surrounding areas near the flats, for a plot of vacant land.

l) Where redevelopment of town centres involve relocation of existing schools, then the developer must build the new school with fully equipped facilities within the same catchment area, before he is allowed to use the land of the existing school for development. Compensation for the land taken for development must be taken into consideration in the relocation exercise.

m) The land and building titles must be surrendered to the Ministry of Education. Where schools are built in high-rise flats, the strata title must be surrendered to the Ministry of Education.

n) There is a need to construct guidelines on standard school design in high-rise flats.

o) The state education department concerned must give preference to the children of the flat dwellers in the enrolment of such schools.

p) The role played by the Parent and Teachers' Association (PTA) and other non-political voluntary associations in the school must be enhanced. The education department must provide the necessary support to ensure the effectiveness of such associations.

q) Up dated data on population at sub-national levels must be an integral part of educational planning.

r) Optimum environmental quality must be maintained around the school to ensure an effective teaching and learning process.

s) All facilities and building elements (whether temporary or permanent) in the general design must satisfy the ergonomic and otropometric needs of the students:
Primary schools in high-rise flats in Malaysia

- classroom furniture
- toilets
- canteen furniture
- library furniture
- the height of windows
- the height of door knobs
- the height of the blackboard and notice board
- other relevant facilities necessary for the teaching and learning process

t) It's proposed that at least 20 per cent of the teachers teaching in such schools be provided with housing in the same flats.

7. Guidelines for Establishing Primary Schools in High-Rise Flats
   - Design Standards

7.1 General Aspects

In line with efforts to have an acceptable design for schools in High Rise flats, alternative designs are proposed (see Table 1).

Each design has its own strong and weak points respectively. Therefore the following propositions must be considered when deciding on a particular design.

a) It is proposed that a primary school (in highly populated areas) be built in the surrounding areas of the high-rise flats (Alternative A).

b) Where the size of the area allocated is less than 1.2 hectares, Alternative B is proposed. Figure 2 shows the said proposed concept.

7.2 Design

a) Location. The walking distance to school, should not be more than 10 minutes.

b) The minimum space required for the building of the primary school of alternative A is 2.4 hectares. In the case of Alternative B, the required area its also 2.4 hectares but 1.2 hectare could be shared.

c) Space. Guidelines laid down by the Public Works Department, the Ministry of Education or the Economic Planning Unit must be complied with (Appendix). A hardstand of 1,000 m² must be allocated for the school.

d) Plot Ratio. A gross plot ratio of 1:2 is proposed.

e) Number of Floors/Headroom. Its submitted that the building should consist of a maximum of four floors. The headroom is to be 3.0 m high.

f) Circulation (Corridor). For the purposes of circulation, either the provisions in the Seventh Schedule Uniform Buildings by Laws 1984 be followed, or a corridor with a width of 1.8 m is built, whichever is wider.
Table 1. Design Guidelines/Requirements for Primary Schools in High-Rise Flats

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Description</th>
<th>Location: Travelling time to school (minutes)</th>
<th>Area in hectares</th>
<th>Space requirement</th>
<th>Plot ratio</th>
<th>Circulation (corridor)</th>
<th>Entrance door</th>
<th>Orientation</th>
<th>Lighting and ventilation</th>
<th>Access to school compound/building</th>
<th>Fencing</th>
<th>Car park</th>
<th>Flexibility - space utilization</th>
<th>Canteen</th>
<th>Advantages of the proposed alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Renovation from existing flats</td>
<td>10 minutes (average)</td>
<td>Total Area: 2.4</td>
<td>As per JKR/ MOE EPU Guidelines 1991 (Appendix)</td>
<td>0.5 Minimum 0.3m headroom (allowed only ground floor unless structural requirements of UBBL are complied) Maximum 4 metres</td>
<td>Minimum 1.8m wide or Seventh Schedule Minimum 2 per c/room (with 2 leaves door opening outside but not obstructing access way) or as Seventh Schedule of UBBL 1984</td>
<td>Adequate sun shading Minimum of 200 Lux at upper floor all rooms ventilation opening area Minimum 30% of wall area of both sides</td>
<td>Separate access to the school compound/ facilities/ area</td>
<td>Required for designated area wherever possible</td>
<td>0.5 per teacher (shared facilities possible)</td>
<td>Convertible to other use</td>
<td>Ground floor/ separate building with covered linkage</td>
<td>1. Conducive environment of the teaching and learning process: - reduced noise distraction. - separated from the public. - situated far from the waste disposal area thus reducing the stench. - complies with the stipulated students. 2. Sports facilities are not shared with the public. 3. Students movement not obstructed by traffic. 4. Better protection for the property belonging to the school, teachers and the students. 5. Provides flexibility in space use.</td>
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</tbody>
</table>
Table 1. Design Guidelines/Requirements for Primary Schools in High-Rise Flats (cont'd)

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Description</th>
<th>Location: Travelling time to school (minutes)</th>
<th>Area in hectares</th>
<th>Space requirement</th>
<th>Plot ratio</th>
<th>No. of storey/bedroom</th>
<th>Circulation (corridor)</th>
<th>Entrance door</th>
<th>Orientation</th>
<th>Lighting and ventilation</th>
<th>Access to school compound/building</th>
<th>Fencing</th>
<th>Car park</th>
<th>Flexibility - space utilization</th>
<th>Canteen</th>
<th>Advantages of the proposed alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Newly Planned School in Flats</td>
<td>10 (Extravagant area of common usage to be shared)</td>
<td>1.2 (Extravagant area of common usage to be shared)</td>
<td>0.5 (Minimum of 100m² for assembly)</td>
<td>Minimum 1.6m</td>
<td>Minimum 1.8m (allowed only ground floor unless structural requirements of UBBL are complied)</td>
<td>Minimum 2 per c/room (with 2 leaves door opening outside but not obstructing access way) or as Seventh Schedule UBBL 1984</td>
<td>Adequate sun shading (orientation away from direct sunlight and noise source)</td>
<td>Minimum of 200 lux at upper floor all floors/levels</td>
<td>Separates access to the school compound/facilities/area</td>
<td>Separated</td>
<td>0.5 per teacher (shared facilities possible)</td>
<td>Convertible to other usage</td>
<td>Ground floor/ separate building with covered linkage</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. It is still possible to build a school in areas of limited land.
2. Distractions from noise and traffic are reduced as the occupied units in the flat are situated at higher levels and there is separate access to the school.
3. Cost effective as facilities are shared between the school and the flat dwellers.
g) **Door (Entrance).** Every classroom should have at least two twin doors. They should open outwards and should not obstruct the entry or exit.

h) **Building Orientation.** Where possible, the building should be placed away from direct sunlight and noisy areas. Adequate sun shades should be provided to reduce glare and direct sunlight.

i) **Lighting and Ventilation.** Minimum level of lighting must be 200 lux whereas an open area for ventilation should be at least 30 per cent of the surface area of the walls at both ends.
j) **Entrance/Exit.** There should be provisions for a separate entrance and exit to the school. Entrance and exit to the school should not be shared with the public.

k) **Fencing.** Both of the suggested alternatives should be adequately fenced.

l) **Car Park.** A car park should be provided for the teachers, at 0.5 unit per teacher.

m) **Flexibility.** The classrooms built should be flexible enough to accommodate the various developments in the curriculum with respect to teaching and learning techniques.

m) All canteens must be placed at the ground floor for either of the alternatives. The canteen should be a separate building linked by sheltered walk ways.

### 7.3 Structural Needs

Loading should be calculated as specified in Chapter 5 Part I of the BSCP 3 or rule 59 of the Uniform Building By-Laws 1984.

### 7.4 Fire Safety Measures

i. **Staircase/corridor/exit doors:**

a) The number/width of staircases required for every floor must be based on the calculation of Occupant Load and Capacity of Exit of the 7th schedule, Uniform Building By Laws 1984.

b) The number/width of doors/corridor required for every floor must be based on the calculation of Occupant Load and Capacity of Exit of the 7th schedule, Uniform Building By Laws 1984.

c) The width amount of staircases be calculated such that if one of the staircases is rendered useless, the other remaining staircases can accommodate the occupants to be discharged during a fire situation.

d) The width of the staircase should not be reduced, as the staircase leads to the ground floor. Storing material in the staircase enclosure can be a hindrance during the course of evacuation.

e) All designs of either opened or enclosed staircases should comply with the Uniform Building by Laws 1984, as to handrail, riser and thread of staircase.

f) Open balcony approach with unenclosed staircases should be provided with extended landings of not less than twice the width of the staircase.

g) All escape staircases should discharge directly outside the building.

h) There should be adequate ventilation for the staircases. Enclosed staircases should have windows not less than 1m² at landing level of each floor.
Proposal

i) A corridor with an open balcony is the most suitable design for a school, whereby it provides a means of escape via the corridor, which will finally lead to the escape staircases.

j) Each classroom should at least have 2 doors opening outwards and it should not obstruct the movement along the corridor.

k) The school hall should have adequate exit doors to enable students to get out of the building.

l) The distance between the exit doors shall not be less than 4.5m.

ii) Separating Wall/External Wall. Where existing flats are proposed to be used as classrooms, 2 units can be used as 1 classroom.

In the case of a low cost flat, where a few floors are used as a school, the separating wall between every classroom should be of non-combustible material of not less than ½ hours rating.

Openings on the external wall located vertically close to one another shall be protected by 2 hours rated wall either extending 750 mm. beyond the exterior wall or by vertical panels not less than 900 mm. in height. Compartment walls shall be provided if the area exceeds the specifications in the 9th schedule of the UBBL 1984.

iii. Location of File Room, Store, Laboratory and Canteen. Location of such rooms should not be near the escape staircases and should be separated by fire rated walls.

iv. Travel Distance and Dead-End. Travel distance from the furthest point to the escape staircase should not be more than 45 metres. The maximum dead-end limit or one way escape should not be more than 6 metres.

v. Requirement of Active Fire Protection. The fire protection system for schools and the library should generally be based on 10th Schedule of the Uniform Building By Laws 1984 (Table of requirements for fire extinguishing alarm systems and emergency lighting).

7.5 Service

Water supply should be in accordance to the regulation laid down by the State Department of Water Supply.

7.6 Health and Environment

i) Quality of air in the school surroundings should be of an acceptable standard to ensure general health and well-being. Guidelines on Quality of Air for Suspended Particulate for Malaysia as specified by the Department of Environment should be
Primary schools in high-rise flats in Malaysia

used to measure relevant parameters (for example; the amount of suspended particulate, sulphur dioxide, nitrogen dioxide, carbon monoxide and ozone in the air).

ii) Noise arising from outside sources such as traffic and industries should be controlled. The maximum level of noise at the school boundaries should not exceed 70 decibels (A). The acceptable noise level of between 45-55 decibels (A) should be maintained in classrooms.

iii) The temperature in the classrooms should be within the range of 74°F - 79°F.

iv) Provision should be made for landscaping, especially in the surrounding area of the school. The landscaped area acts as a buffer zone against outside noise, promotes circulation of air and thus creating a conducive environment.

8. Conclusion

The Educational Planning and Research Division of the Ministry of Education, together with the co-operation of the various Ministries, departments and schools have drawn up a proposal on guidelines (policy and technical) concerning the building of Primary Schools in High-Rise flats. The guidelines were formulated to assist the education policy makers, town planners and housing developers in their planning of urban schools so that the educational needs, especially of those from the lower income group, will be properly addressed.
APPENDIX
### Appendix

**SCHOOL FACILITIES**

<table>
<thead>
<tr>
<th>School Facilities</th>
<th>For school use only</th>
<th>For school and public use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Administration</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>2. Academic</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3. Others</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>4. Canteen and Hall (Compulsory)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>5. Assembly Area (Open)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>6. Recreational Facilities and Area</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
List of Working Papers Presented


Appendix


References


Malaysian Administrative Modernization and Manpower Planning Unit. Report on Guidelines for Manpower Planning and Budgeting in the Public Sector.


List of Participants

Seminar-cum-Workshop on the Formulation of Guidelines for the Establishment of Primary Schools in High-Rise Flats in Malaysia

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