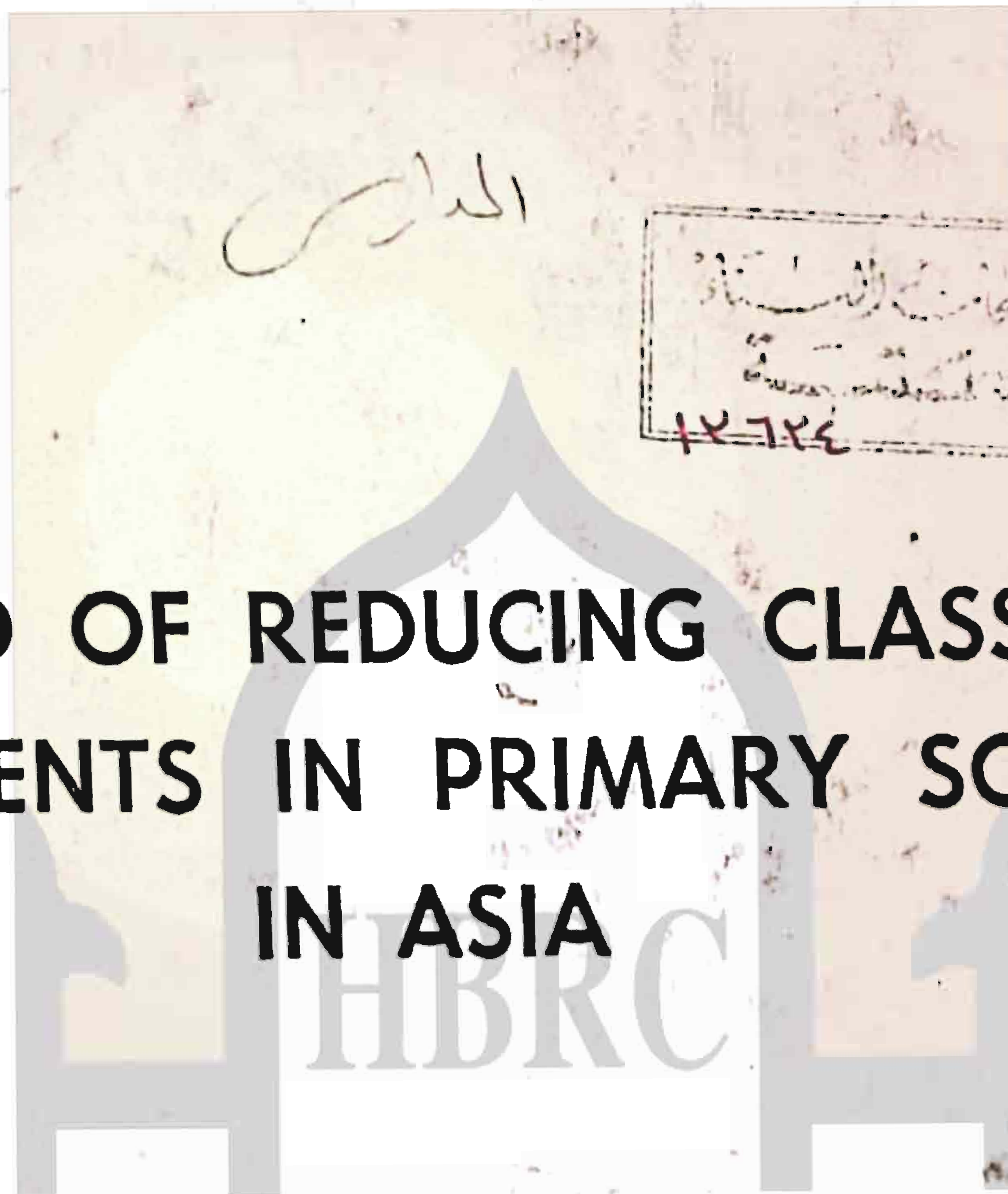


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**A METHOD OF REDUCING CLASSROOM
REQUIREMENTS IN PRIMARY SCHOOLS
IN ASIA**

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A Method of Reducing Classroom Requirements
in Primary Schools in Asia

by

R.D.SRIVASTAVA, A.I.I.A.
Scientist
Central Building Research Institute,
Roorkee, India.

B.M.GUPTA, M.A., L.T., D.Phil.
District Inspector of Schools
Saharanpur (U.P.)
India.

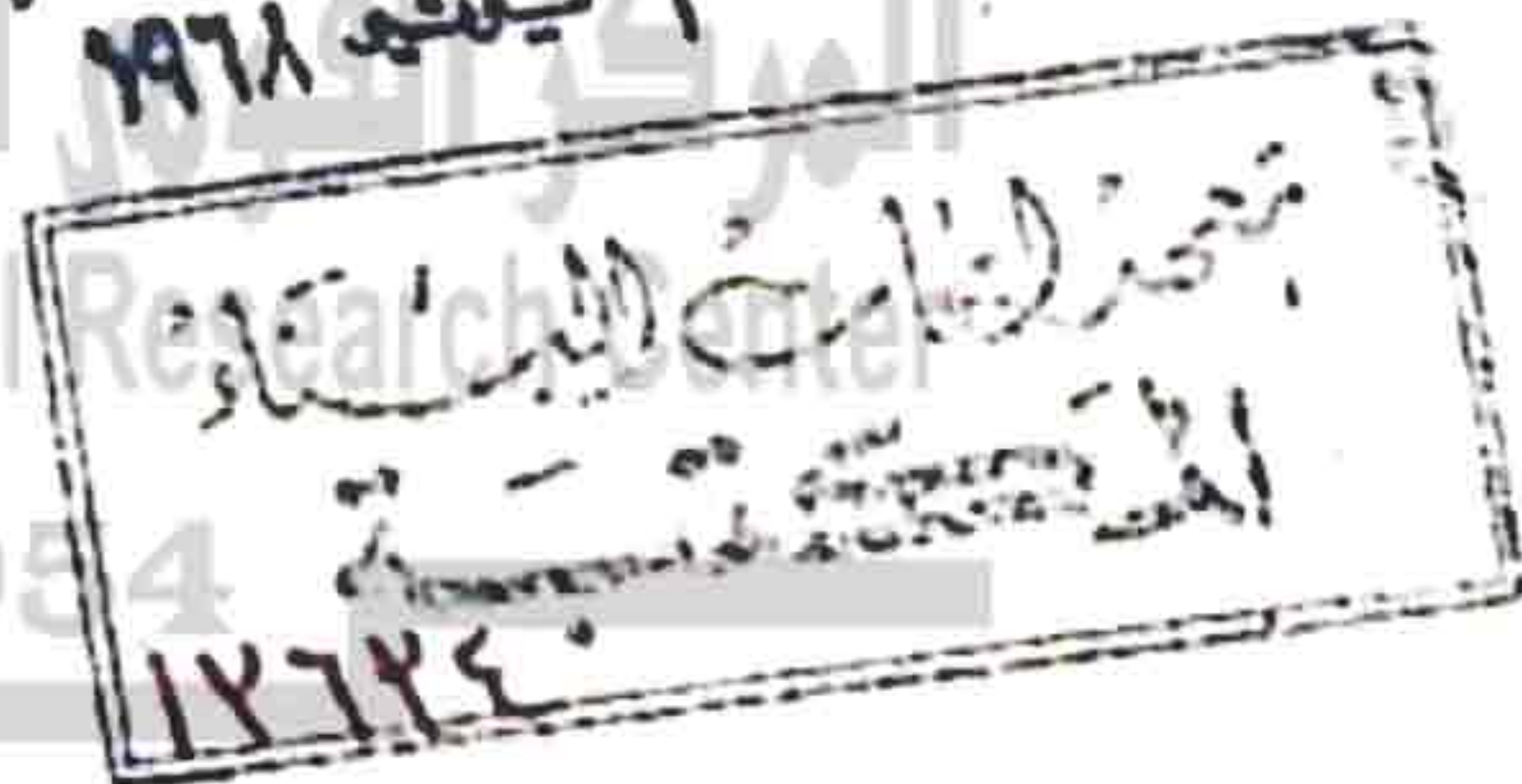
and

D.J.VICKERY, A.R.I.B.A.
Architect and Head of Unesco Project
ARISBR

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P R E F A C E

In most Asian countries there is a need to stretch the annual budget for primary school buildings to its limit so that the maximum number of new places is constructed annually. In such a context the educationist faces the alternatives of providing more conventional building solutions for fewer children, or devising other and perhaps less orthodox ways of getting more children into school without lowering the quality of education provided.

There are many ways of tackling this problem: more places can be provided by reducing the gross covered area per student, by lowering the cost of construction, by arranging for the building to be used in shifts and so on.

It was with these problems in mind that in 1964 the Asian Regional Institute for School Building Research produced a paper entitled "A Comparative Study of Multi-Purpose Rooms in Educational Buildings".^{1/} In this a method was introduced for accurately measuring the utilisation of space in schools by means of a use-factor. The method involved comparison of the optimum use of each unit area of covered space for every hour of the day, with the actual use per hour. The resulting ratio gave the use-factor.

Examination of schools in the Asian Region showed use-factors as low as 25% to be quite common.

In a country such as India the application of these ideas is of special relevance for although the overall enrolment in Indian primary schools is high, the number of children yet to be housed is such as to require very heavy capital investment in building. Moreover, first-level education which in India is a State responsibility has developed at different rates from state to state.^{2/} Some states thus face a much more formidable primary school building programme than might be thought to be the case from a study of the overall situation.

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- 1/ Asian Regional Institute for School Building Research. Occasional papers; school building, no.7: A comparative study of multi-purpose rooms in educational buildings. Bangkok, Unesco, 1964.
 - 2/ MISRA, ATMANAND. Educational balance-sheet of States. Education quarterly v.17, no.66 (Jun) 1965, p.64-8, 83. New Delhi, Ministry of Education, Government of India.

In 1966, Mr.R.D.Srivastava, architect at the Central Building Research Institute, Roorkee, India, started further work on use-efficiency with a view to achieving economy of space in Indian schools. He decided, as a result of this, to establish ways of making more sensible use of space in primary schools. Working with Dr.B.M.Gupta, District Inspector of Schools for Saharanpur (U.P.), India, an experiment was started, the object of which was to achieve maximum use of covered space through the provision of classrooms only for teaching those subjects which could not be taught outside on the school site.

The result of this work was to increase the use-factor to 85% and to reduce the gross covered area of the standard primary school by 40%.

Clearly, the approach to the problem involves much more than a mere reduction of the area of the building. The feasibility of the solution will depend not only on maintenance of the quality of education but also on the existence of suitable climatic conditions for outdoor teaching.

The Asian Regional Institute, whilst publishing the papers of Mr.Srivastava and Dr.Gupta, has provided an analysis of rainfall and a tentative study of thermal comfort conditions in India which will, it is hoped, serve to highlight the climate and the very considerable advantages in terms of capital investment and education where the weather is clement.

It has also suggested fields of possible further study in relation to points arising from the two papers.

This paper outlines an approach through a study of the curriculum and the corresponding need for covered space. The conclusions reached may be thought unreasonable by those used to more conventional school buildings, but in the context in which they apply, they undoubtedly present a solution to the problem of getting into school children who would otherwise have no opportunity of primary education.

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