A STUDY OF THE LIAISON MECHANISM BETWEEN ARCHITECTS IN THE PRIVATE SECTOR AND THE TPA IN RELATION TO THE DESIGN OF AND ADDITIONS TO PRIMARY SCHOOLS

by

George Candiotes

Submitted in fulfilment of part of the requirements for the degree of

Master of Architecture in the

Faculty of Mathematics and Science

University of Pretoria

May 1983
FOREWORD

The Transvaal Provincial Administration is one of four governing bodies comprising the second tier of government administration in the Republic of South Africa, and one of their delegated responsibilities is the provision and administration of Pre-primary, Primary and Secondary Education for the entire white population within the boundaries of the Transvaal. To this end, the Transvaal Education Department was established and functions within the Education Acts and Ordinance prescribing its function and limitations. The Transvaal Works Department is the department of the TPA which is responsible for the provision of all buildings, plant and equipment as well as the maintenance thereof, for all the other departments usually referred to by the TWD as the user or client departments.

Ideally, there are departments that, not only require buildings but also have the expertise to determine an accommodation schedule and specify the nature of the function of the building and a large department, known as the TWD, whose function it is to provide these requirements. To render this service, the TWD employs the services of professional consultants in the private sector to prepare the necessary documentation to enable the contractors in the private sector to tender for and provide the required services.

The TWD has, for its building work, a professional section of architects, quantity surveyors and engineers who, for primary school buildings, must obtain the requirements from the client department. The TED conveys this information to the architects in the private sector for the satisfactory preparation of contract documents and subsequent provision of the school buildings.

This study is concerned with and confined to the provision of primary school buildings in the Transvaal. A superficial investigation made it quite clear that the success of the entire building programme hinges around the success of the liaison between the Architects in the Private sector and the TPA.

The success or failure of the liaison mechanism is shown to be entirely dependant on the proficiency of the TWD's Liaison Architect
the efficiency of the communication system and the completeness of the data supplied to the architect in the Private Sector.

The present liaison mechanism does have shortcomings, but fortunately contains the necessary seeds required for the relatively simple adjustments to bring about the desired improvements.
ACKNOWLEDGEMENTS
ACKNOWLEDGEMENTS

Any form of research is dependant upon the voluntary assistance of associated persons and instances. It is therefore prudent to make mention of the few instances without whose help this study would not have been possible.

My first debt and duty is to the Public Service Commission for their financial assistance without which this study would have to have been indefinitely delayed.

To Professor Alewyn Burger, my supervisor I am gratefully indebted for his enthusiastic interest, inspiration and assistance beyond the normal parameters of his duty.

To the Transvaal Works Department and Transvaal Education Department for their co-operation and assistance at all levels and for the assistance of their staff members during my search for information.

And finally, there could be very little substance to this study if I were not so ably assisted by the members of the Architectural Profession who so meticulously, thoroughly and professionally replied to and promptly returned the questionnaires I sent to them, without prior consultation.
INDEX

Foreword .......................................................... ii
Acknowledgements ............................................. iv
List of Tables ...................................................... viii
List of Figures ....................................................... ix

CHAPTER I - THE PROBLEM AND ITS SETTING
1 The Statement of the Problem ................................. 1
2 The Subproblems .................................................. 1
3 The Hypotheses .................................................... 1
4 The Delimitations ................................................... 2
5 The definitions of terms and abbreviations .................. 2
6 Assumptions ......................................................... 3
7 The need for the Study ............................................ 4

CHAPTER II - THE DATA, THEIR TREATMENT AND INTERPRETATION
1 The Data .......................................................... 5
2 The Questionnaires ............................................... 5
3 The Response ....................................................... 6
4 The Treatment ...................................................... 6
5 The Interpretation ................................................... 6

CHAPTER III - REVIEW OF RELATED LITERATURE
1 Introduction ......................................................... 8
2 Role Theory ........................................................ 8
3 Role expectations and behaviour ................................. 10
4 The duties of the Architect ....................................... 14
5 Summary ............................................................ 14

CHAPTER IV - GENERAL PROCEDURES
1 The origin of a project ............................................ 17
2 The private sector .................................................. 18
3 The selection of the Consultant Architect ...................... 18
4 The appointment of the Consultant Architect .................. 19
5 Contractual agreement ............................................. 20
6 The role of the Liaison Architect ................................. 22
7 The Liaison Architect's dual role ................................. 23
8 The role of the Private Architect ................................. 24
9 The stages in chronological order ................................. 28
CHAPTER V - NEW SCHOOLS

1. The Site ........................................................... 33
2. The schedule of accommodation ................................. 33
3. The standard plans .................................................. 38
4. Review of the validity and effectiveness of the current standardised primary school buildings .......................................................... 38
5. Use of standardisation .................................................. 40
6. Adaptation of standard plans ........................................... 42
7. Co-ordination of Consultants ......................................... 44
8. The Commission .......................................................... 44

CHAPTER VI - ADDITIONS TO EXISTING SCHOOLS

1. The Site ........................................................... 45
2. The Schedule of Accommodation ...................................... 45
3. Letters of Appointment ................................................... 46
4. The standard plans ....................................................... 47
5. The Commission .......................................................... 49
6. Summary ................................................................. 49

CHAPTER VII - DOCUMENTATION AND EXECUTION OF CONTRACT

1. The sketch plans ........................................................... 51
2. The working drawings ..................................................... 53
3. Co-ordination of Disciplines ............................................ 55
4. Handing over the Building Site ........................................... 59
5. Supervision and Variation Orders ....................................... 60
6. Authority and restrictions of the Private Architect .................. 61
7. The Role of the Provincial Inspectorate ................................ 62
8. The delivery and acceptance of the buildings ......................... 63

CHAPTER VIII - THE RESULTS

1. Data ................................................................. 65
2. Related literature .......................................................... 65
3. The Questionnaire ........................................................ 66
4. Analysis of answers ....................................................... 69
5. Case histories ............................................................ 71
6. Pro-forma letters .......................................................... 72
7. The Hypotheses ........................................................... 74
<table>
<thead>
<tr>
<th>CHAPTER IX - SUMMARY, CONCLUSIONS AND RECOMMENDATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Introduction ...........................................</td>
<td>76</td>
</tr>
<tr>
<td>2 Summary of the study ....................................</td>
<td>76</td>
</tr>
<tr>
<td>3 Recommendations .........................................</td>
<td>76</td>
</tr>
<tr>
<td>4 Concluding Statement ....................................</td>
<td>78</td>
</tr>
<tr>
<td>SYNOPISI ................................................................</td>
<td>80</td>
</tr>
<tr>
<td>SAMEVATTING ..................................................</td>
<td>82</td>
</tr>
<tr>
<td>APPENDICES ....................................................</td>
<td>84</td>
</tr>
<tr>
<td>BIBLIOGRAPHY ..................................................</td>
<td>106</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Page No.

TABLE 1  Summarised results of questionnaires sent to Private Architects  7
LIST OF FIGURES

Page No.

FIGURE 1    Ideal configuration of primary school component blocks .......................... 34
A study of the liaison mechanism between architects in the private sector and the TPA in relation to the design of and additions to primary schools

by

George Candiotes

Supervisor: Professor A.P. Burger

Department of Architecture

Degree: Master of Architecture

SYNOPSIS

The need for the study arises from the assumption that the present liaison mechanism between architects in the private sector and the Transvaal Provincial Administration is deficient. The weaknesses are defined and presented by way of sub-problems and hypotheses arising therefrom. In order to limit the extent of the research and investigations, the study is confined to the liaison mechanism relating to primary schools only, within the Province of Transvaal.

The data have been obtained from replies to questionnaires received
from selected but individually unidentifiable architects in private practice as well as from answers to a standard set of questions verbally put to officials in various State departments. To further illustrate weaknesses in briefing and communication, a few case histories have been described.

The assessment by related literature has largely been confined to the views of educationists, sociologists, economists and architects. In essence, these views accentuated the importance of sound communication, role expectation and role perception amongst the professionals representing the various disciplines engaged in the need for design and construction of educational buildings. Related literature leaves no doubt as to the importance of correct selection and acceptance of the architect as the leader of the professional team.

A detailed investigation of the present liaison mechanism clearly reveals the areas of weakness which consequently affect efficiency as well as the steps that can be taken to improve the efficacy of the liaison mechanism.

The progressive stages of a project from its inception to its completion are discussed in strict chronological order and in detail, leaving no doubt as to where the delays can and do occur.

In conclusion, an effort is made to pinpoint the areas which need attention. Recommendations are also suggested in regard to eliminating any misunderstandings in role perception and expectation, and for the improvement and accuracy of the initial briefing.
'n Ondersoek na die skakelmeganisme tussen argitekte in die private sektor en die TPA met betrekking tot die ontwerp van en aanbouings van primêre skole

deur

George Candiotes

Leier: Professor A.P. Burger

Departement Argitektuur

Graad: Magister in Argitektuur

SAMEVATTING

Die noodsaaklikheid vir die ondersoek spruit voort uit die veronderstelling dat die huidige skakelmeganisme tussen argitekte in die private sektor en die Transvaalse Provinsiale Administrasie gebrekkig is. Die swakhede word omskryf en voorgedra by wyse van subprobleme en hipoteses wat daaruit voortspruit. Ten einde die omvang van die navorsing en ondersoekte te beperk, handel die studie oor die skakelmeganismes wat slegs met primêre skole in die Provinsie Transvaal verband hou.

Die inligting is verkry uit antwoorde op vraelyste wat van gekeurde,
maar individueel nie-identifiseerbare argitekte in private praktyke ontvang is, sowel as uit ’n standaard stel vrae wat mondelings aan beamptes in verskeie Staatsdepartemente gestel is. Om die tekortkominge in opdrag-gewing en kommunikasie verder te illustreer, is ’n paar gevallestudies ook behandela.

Die oorsig oor verwante literatuur is grootliks tot die menings van opvoedkundiges, sosiooloë, ekonome en argitekte beperk. Kortliks lê hierdie menings klem op die belangrikheid van gesonde kommunikasie, rolverwagting en rolpersepsie tussen professionele persone wat die verskillende disiplines verteenwoordig, en wat met die ontwerp en konstruksie van opvoedkundige geboue gemoeid is. Die verwante literatuur laat geen ruimte vir twyfel oor die belangrikheid van die korrekte keuring en aanvaarding van die argitek as die leier van die professionele span nie.

’n Gedetailleerde ondersoek na die bestaande skakelmeganismes toon duidelik watter gebiede ondoeltreffend is, wat gevolglik ’n uitwerking het op doeltreffendheid sowel as op die stappe wat gedoen kan word om die doeltreffendheid van die skakelmeganisme te verbeter.

Die progressiewe stadiums van ’n projek, van die begin af tot by voltooiing, word in streng chronologiese volgorde en in besonderhede bespreek, en laat geen twyfel nie oor waar die vertragings wel voorkom.

Ten slotte, is ’n poging aangewend om areas wat aandag verg uit te lig. Aanbevelings word gedoen ten einde misverstande in rolpersepsie en verwagting uit te skakel en die akkuraatheid van die eerste voorligting te verbeter.