

高等学校试用教材

# 建筑类 专业英语

建筑学与城市规划  
(第一册)

Architecture

English in Architecture

and Construction

19.4  
6

王庆昌 余曼筠 主编



中国建筑工业出版社

高等学校试用教材

# 建筑类专业英语

## 建筑学与城市规划

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王庆昌	余曼筠	主编
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本书为满足高等院校建筑学与城市规划专业的专业英语教学之需要而编写。取材范围、内容深浅、项目设置, 均按国家教委颁发的《大学英语专业阅读阶段教学基本要求》设定。在满足教学大纲要求的前提下, 尽量选用新颖而趣味性强的内容, 以开扩读者的眼界并增加对学习的兴趣, 由于注释详细并有参考译文, 也可供相关专业人员自学专业英语之用。

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## 前 言

经过几十年的探索，外语教学界许多人认为，工科院校外语教学的主要目的，应该是：“使学生能够利用外语这个工具，通过阅读去获取国外的与本专业有关的科技信息。”这既是我们建设有中国特色的社会主义的客观需要，也是在当前条件下工科院校外语教学可能完成的最高目标。事实上，教学大纲规定要使学生具有“较强”的阅读能力，而对其他方面的能力只有“一般”要求，就是这个意思。

大学本科的一、二年级，为外语教学的基础阶段。就英语来说，这个阶段要求掌握的词汇量为2 400个（去掉遗忘，平均每个课时10个单词）。加上中学阶段已经学会的1 600个单词，基础阶段结束时应掌握的词汇量为4 000个。仅仅掌握4 000个单词，能否看懂专业英文书刊呢？还不能。据统计，掌握4 000个单词，阅读一般的英文科技文献，生词量仍将有6%左右，即平均每百词有六个生词，还不能自由阅读。国外的外语教学专家认为，生词量在3%以下，才能不借助词典，自由阅读。此时可以通过上下文的联系，把不认识的生词猜出来。那么，怎么样才能把6%的生词量降低到3%以下呢？自然，需要让学生增加一部分词汇积累。问题是，要增加多少单词？要增加哪一些单词？统计资料表明，在每一个专业的科技文献中，本专业最常用的科技术语大约只有几百个，而且它们在文献中重复出现的频率很高。因此，在已经掌握4 000单词的基础上，在专业阅读阶段中，有针对性地通过大量阅读，扩充大约1 000个与本专业密切有关的科技词汇，便可以逐步达到自由阅读本专业科技文献的目的。

早在八十年代中期，建设部系统院校外语教学研究会就组织编写了一套《土木工程系列英语》，分八个专业，共12册。每个专业可选读其中的三、四册。那套教材在有关院校相应的专业使用多年，学生和任课教师反映良好。但是，根据当时的情况，那套教材定的起点较低（1 000词起点），已不适合今天学生的情况。为此，在得到建设部人事教育劳动司的大力支持，并征得五个相关专业教学指导委员会同意之后，由建设部系统十几所院校一百余名外语教师和专业课教师按照统一的编写规划和要求，编写了这一套《建筑类专业英语》教材。

《建筑类专业英语》是根据国家教委颁发的《大学英语专业阅读阶段教学基本要求》编写的专业阅读教材，按照建筑类院校共同设置的五个较大的专业类别对口编写。五个专业类别为：建筑学与城市规划；建筑工程（即工业与民用建筑）；给水排水与环境保护；暖通、空调与燃气；建筑管理与财务会计。每个专业类别分别编写三册专业英语阅读教材，供该专业类别的学生在修完基础阶段英语后，在第五至第七学期专业阅读阶段使用，每学期一册。

上述五种专业英语教材语言规范，题材广泛，覆盖相关专业各自的主要内容：包括专业基础课，专业主干课及主要专业选修课，语言材料的难易度切合学生的实际水平；词汇

以大学英语“通用词汇表”的4 000个单词为起点,每个专业类别的三册书将增加1 000~1 200个阅读本专业必需掌握的词汇。本教材重视语言技能训练,突出对阅读、翻译和写作能力的培养,以求达到《大学英语专业阅读阶段教学基本要求》所提出的教学目标:“通过指导学生阅读有关专业的英语书刊和文献,使他们进一步提高阅读和翻译科技资料的能力,并能以英语为工具获取专业所需的信息。”

《建筑类专业英语》每册16个单元,每个单元一篇正课文(TEXT)、两篇副课文(Reading Material A & B),每个单元平均2 000个词,三册48个单元,总共约有十万个词,相当于原版书三百多页。要培养较强的阅读能力,读十万个词的文献,是起码的要求。如果专业课教师在第六和第七学期,在学生通过学习本教材已经掌握了数百个专业科技词汇的基础上,配合专业课程的学习,再指定学生看一部分相应的专业英语科技文献,那将会既促进专业课的学习,又提高英语阅读能力,实为两得之举。

本教材不仅适用于在校学生,对于有志提高专业英语阅读能力的建筑行业广大在职工程技术人员,也是一套适用的自学教材。

建设部人事教育劳动司高教处和中国建设教育协会对这套教材的编写自始至终给予关注和支持;中国建筑工业出版社第五编辑室密切配合,参与从制定编写方案到审稿各个阶段的重要会议,给了我们很多帮助;在编写过程中,各参编学校相关专业的许多专家、教授对材料的选取、译文的审定都提出了许多宝贵意见。

本书为《建筑类专业英语》建筑学与城市规划专业第一册。由王庆昌和余曼筠主编,霍维国主审,谢工曲、赵凤霞、刘雁鹏参加编写。承艾贵三协助收集资料,李中英和陈海龙为书稿录入,王晓为本书插图付出了辛勤的劳动,谨此致谢。

《建筑类专业英语》是我们编写对口专业阅读教材的又一次尝试,由于编写者水平及经验有限,教材中不妥之处在所难免,敬请广大读者批评指正。

《建筑类专业英语》  
编审委员会

# Contents

## UNIT ONE

Text	Architecture	1
Reading Material A	The Study of Architecture	6
Reading Material B	Modern Education of the Architecture	8

## UNIT TWO

Text	Housing	10
Reading Material A	Early Housing	15
Reading Material B	Recent Trends of Housing	17

## UNIT THREE

Text	The Language of Architecture ( I )	20
Reading Material A	The Language of Architecture ( I )	25
Reading Material B	The Language of Architecture ( II )	27

## UNIT FOUR

Text	The Financial Setup ( I )	30
Reading Material A	The Financial Setup ( I )	35
Reading Material B	The Financial Setup ( II )	36

## UNIT FIVE

Text	The Domain of Urban Design	39
Reading Material A	City Country Fingers	45
Reading Material B	City Planning	47

## UNIT SIX

Text	Shopping Center	50
Reading Material A	Web of Shopping	56
Reading Material B	Green Streets	58

## UNIT SEVEN

Text	Roof Layout	61
Reading Material A	Cascade of Roofs	67
Reading Material B	Roof Garden	68

## UNIT EIGHT

Text	Lighting	71
Reading Material A	Pools of Light	77
Reading Material B	Acoustics	79

## UNIT NINE

Text	The Evolution of Cluster Housing	83
Reading Material A	House Cluster	90

Reading Material B	Low-rise, Medium-density Cluster Housing .....	92
UNIT TEN		
Text	Where do We Go from Here—Architecturally .....	95
Reading Material A	Structural Systems for Multi-use High-rise Buildings .....	100
Reading Material B	Four-story Limit .....	102
UNIT ELEVEN		
Text	Tall Building .....	105
Reading Material A	Design Criteria of Tall Building .....	110
Reading Material B	Stiffness and Drift Limitation .....	112
UNIT TWELVE		
Text	Parking .....	115
Reading Material A	Nine Percent Parking .....	121
Reading Material B	Shielded Parking .....	124
UNIT THIRTEEN		
Text	Ornament .....	126
Reading Material A	Architecture is the Ornament of Human Environment .....	132
Reading Material B	The Function of Ornament .....	135
UNIT FOURTEEN		
Text	The Development of a Low-rise Urban Housing Alternative .....	138
Reading Material A	Magic of the City .....	145
Reading Material B	Activity Nodes .....	146
UNIT FIFTEEN		
Text	The Architecture of Hospital——Breaking the Paradigm .....	149
Reading Material A	Theater .....	155
Reading Material B	Holy Ground .....	157
UNIT SIXTEEN		
Text	The Practice of Architecture ( I ) .....	159
Reading Material A	The Practice of Architecture ( II ) .....	164
Reading Material B	The Futural Practice of Architecture .....	166
Appendix I	Glossary .....	168
Appendix II	Translation for Reference .....	176
Appendix III	Key to Exercises .....	198



## UNIT ONE

### Text

### Architecture

[1] Architecture is the art of building. Virtually all architecture is concerned with the enclosure of space for human use. The precise activities to be housed in any specific building, ranging from an assembly line in a factory to a living room in a home, should dictate the size and shape of the several areas within. ① These spaces also must be arranged in some logical relation to each other. Furthermore, the movement of human beings within the building requires halls stairs or elevators whose size is governed by the expected load of traffic. ② The plan of a structure, always the first consideration of an architect, is the resolution of these different purposes into an organization of spaces that will fulfill the intent of the building. ③ Good planning guides the visitor to his destination in the structure and impresses him, perhaps subconsciously, by visibly relating the several units of the edifice. Conversely, a bad plan results in inconvenience, waste and visual confusion.

[2] Furthermore, a structure must be well built, it could have such permanence as the purpose for which it is intended demands and as the materials chosen may allow. The raw materials of architecture—stone, brick, wood, steel, or glass—in part govern the forms of the building and are expressed by them. Stone can resist compression almost indefinitely. While it is possible to crush stone in a laboratory, for practical purposes its compressive strength is unlimited. ④ On the other hand, stone is weak in withstanding tension. Any beam spanning a void tends to bend downward between the supports, putting the lower half of the beam under tension. It follows from the tensile weakness of stone that beams of this material must be comparatively short and supported at frequent intervals. ⑤ Moreover, stone columns must be sturdy, rarely more than 10 times as high as they are wide. In stone buildings, windows, doors, and the spaces between columns are almost compelled to be taller than they are wide—the vertical rectangle of the stone aesthetic.

[3] Wood, a fibrous material, withstands tension as readily as it does compression. ⑥ Wooden beams may be relatively longer than stone beams, and wooden posts slender and widely spaced. ⑦ A horizontal rectangle, wider than it is high, results from the natural properties of wood, as may be seen in Japanese architecture. ⑧ Steel also has tensile strength that is equal to or greater than its compressive strength. Anyone who has observed a steel building under construction must have noticed the gridiron of horizontal rectangles produced by the slender, widely spaced columns and the long beams of each floor. The nature of wood and of steel suggests frame construction—a skeleton to support floors and roof—with whatever surfacing material may be necessary. Wood and steel also permit cantilever construction in which beams project beyond the last point of support.

[4] Finally, architecture must do more than meet the physical requirements of strength and

space; it must also content the spirit of man. The building should form an aesthetic unity to which the several parts contribute. Thus, the sides and rear of a structure should bear sufficient correspondence to the front to make them all related parts of a single whole.<sup>⑧</sup> The major internal divisions, too, require some expression in the external design. The nave, aisles, transepts, apse, and radiating chapels of Gothic cathedrals, for example, are all visible on the exterior, so that the visitor is subconsciously prepared for what he will find inside.

[5] Architecture calls for good proportions—a pleasing relationship of voids to solids, of height to width, of length to breadth. Many attempts have been made to explain good proportions by mathematical formulas, such as the golden section. These efforts have not found general acceptance, however, although good results have been achieved through the repetition of some dimension ( for example, a module that is half the diameter of a column ) throughout a design. Such repetitions help to produce the visible order that the human mind seems to crave.

[6] A building also should have what architects call “scale”: that is, it should visually convey its true size. Such elements as benches, steps, or balustrades, though slightly variable in size, are, by their very purpose, related to the normal dimensions of human beings.<sup>⑨</sup> They therefore become, almost imperceptibly, units of measurement for gauging the size of the whole edifice. Because these units are so small in comparison to the whole building, other elements of intermediate size are needed. Stairs and a balustrade may give a clue to the size of a doorway; that, in turn, to the height of a colonnade; and finally, the colonnade to the whole structure. The Petit Trianon at Versailles is perfect in scale. The absence of small elements in St. Peter’s in Rome makes it difficult to perceive its vastness.

[7] Although all decoration is rejected in some modern architecture, it was employed in the past either for its inherent beauty or to emphasize some point of importance in the building. Decoration or ornament may be used to contribute to character, the visible expression of the purpose of the building. Thus a bank should look like a bank, and a church should be immediately identifiable as such. Ideally, too, any building should seem to belong on its site, with some relationship to its architectural neighbors and to the local geography.

## Words and Expressions

enclosure * [in'kləʊʒə]	n.	围墙 (栏); 封围
dictate [dik'teit]	v.	规定; 限定
subconsciously ['sʌb'kɒnfəsli]	ad.	下 (潜) 意识地
edifice ['edifice]	n.	大厦, 大建筑物; 体系
compression * [kəm'preʃən]	n.	压力; 压缩
withstand * [wið'stænd]	v.	经受得住; 抵抗
span * [spæn]	v.	跨过; 架设
	n.	跨度; 开度
void * [void]	n.	空间 (位), 虚 (空) 体

tensile * ['tensail]	a.	空的，无人使用的；虚的
sturdy ['stʊ:di]	a.	张力的，拉力的
rectangle * ['rektæŋgl]	a.	结实的，坚固的
aesthetic [i:s'θetik]	n.	长方形，矩形
fibrous * ['fibrəs]	a.	美学的，审美的
readily ['redili]	a.	含纤维的，纤维状的
gridiron ['gridaɪən]	ad.	容易地，不费力
skeleton ['skelɪtn]	n.	梁格结构，格状结构
cantilever ['kæntili:və]	n.	构架；草图；轮廓
project * [prə'dʒekt]	v.	悬臂梁，突梁
correspondence [kəris'pɒndəns]	v.	伸（突）出；设计
nave [neiv]	n.	符合，一致；相应
aisle [ail]	n.	（教堂的）正厅；（火车站等建筑的）中间广场
transept ['trænsɛpt]	n.	走廊，侧廊
chapel [tʃæpl]	n.	（教堂的）袖廊，翼部
apse [æps]	n.	小礼拜堂
Gothic [gəθɪk]	n.	多边形（或半圆形）凹室；耳（室）房
cathedral [kəθi'dræl]	n.	哥特式建筑的
module * ['mɒdju:l]	n.	大教堂，主教堂
crave [kreiv]	n.	模度（数，量）；模件
imperceptibly [impə'septəbli]	v.	渴望，需要
balustrade [bæləs'treɪd]	ad.	觉察不到地
colonnade [kɒlə'neɪd]	n.	栏杆，扶手
inherent * [ɪn'hɪərənt]	n.	柱廊，柱列
ornament ['ɔ:nəmənt]	a.	内在的，固有的
identifiable [ai'dentɪfaɪəbl]	n.	装饰（物）
	a.	可识别的，可区别的

## Notes

- ①被动式动词不定式短语作名词定语时，不仅含有被动的意思，而且也具有将来的概念。因此，to be housed in any specific building 可译作“将要容纳在具体建筑物里的”。house 作动词用，意为“收容；寄宿；遮蔽”等。
- ②load of traffic 直译为交通负荷，也可译为交通量。
- ③...the resolution of these different purposes into an organization of spaces that will fulfill the intent of the building. 直译为：解决了把这些不同的目的安排成满足建筑意图的空间组合。（正文见参考译文）。
- ④while 作为并列连接词使用时，连接的是一个事物两个相反的方面，一般置于第二个并列分句之首，译作“而”。但有时也置于第一个分句前面，或译作“虽然……但……”，或

仍译作“而”与第二个分句的译文连在一起。

5) 其中词组 follow from 意为“根据(是从)……得出的”。

6) …withstands tension as readily as it does compression.

其中 does 代替 withstands.

7) …and wood posts slender and widely spaced.

句中 wood posts 与 slender 之间省去了 may be 二词。

8) …as may be seen in Japanese architecture.

as 引导的句子系特种定语从句 (special attributive clause), 修饰前边整个句子。

9) …should bear sufficient correspondence to…

意为“应当与……保持充分一致”。

10) 该句的主要结构是 Such elements…are…related to the normal dimensions of human beings. 其中 by their very purpose 是谓语的状语。

## Exercises

### Reading Comprehension

I. Say whether the following statements are true (T) or false (F) according to the text, making use of the given paragraph reference numbers.

1. The very purpose of a building is to provide indoor spaces for human beings to have activities inside. (Para. 1) ( )
2. Building materials, such as stone, brick, wood, steel or glass, require permanence from an architectural structure. (Para. 2) ( )
3. Wood has tensile strength that is equal to or greater than its compressive strength. (Para. 3) ( )
4. It is essential that architecture must meet the need of human spirit. (Para. 4) ( )
5. Efforts of using mathematical formulas in a design may help achieve good proportions between structures, though they have been not widely accepted. (Para. 5) ( )
6. While small elements are related to the average size of human beings and therefore used as units to measure buildings, elements of intermediate size are still needed for the same purpose. (Para. 6) ( )
7. According to the last paragraph, the author prefers not to use decoration or ornament in modern architecture. (Para. 7) ( )

II. Fill in the missing words or expressions for the following sentences from the text.

1. These spaces also must be arranged in some \_\_\_\_\_ each other.
2. Any beam spanning a void tends to bend downward between the \_\_\_\_\_, putting the lower half of the beam \_\_\_\_\_.
3. The natures of wood and steel suggest \_\_\_\_\_, with whatever \_\_\_\_\_ may be necessary.

4. The building should form an aesthetic \_\_\_\_\_ to which several parts contribute.
5. Thus, the sides and rear of a structure should \_\_\_\_\_ to the front to make them all related parts of a single whole.
6. Although all decoration is rejected in some modern architecture, it was employed in the past either \_\_\_\_\_ or \_\_\_\_\_ in the building.
7. Stairs and a balustrade may give a clue to the \_\_\_\_\_ of a doorway; that, in turn, to the \_\_\_\_\_ of a colonnade; and finally, the colonnade to the \_\_\_\_\_.

### Vocabulary

- I. Complete the following sentences with some of the words listed below, changing the form where necessary.

withstand	project	enclosure
identifiable	inherent	void
fibrous	correspondence	

1. The \_\_\_\_\_ within the fence is large enough for the community to have a public park.
  2. The old arch stone bridge was so well structured that it can still \_\_\_\_\_ heavy traffic.
  3. It is better for a new building to bear \_\_\_\_\_ to its neighboring buildings in height.
  4. Human beings, especially women, have an \_\_\_\_\_ love of beauty.
  5. The house is easily \_\_\_\_\_ as Chinese traditional structure because of its typical classic mode.
- II. Complete each of the following statements with one of the four choices given below.
1. Usually an \_\_\_\_\_ consists of several units, which have some relationship between each other.  
A. space            B. edifice            C. room            D. office
  2. The \_\_\_\_\_ between the supports is a little bit long, so steel beams should be used.  
A. column            B. frame            C. span            D. skeleton
  3. \_\_\_\_\_ unity in building style is one of the purposes that architects always try to achieve in their designing plan.  
A. Aesthetic            B. Spacious            C. Economic            D. Content
  4. A roof cap functions as not a mere \_\_\_\_\_, but also a finishing mark of the roof and a touch with the sky.  
A. cover            B. separation            C. ornament            D. structure
  5. Wood can withstand greater \_\_\_\_\_ strength than stone.  
A. compressive            B. deformable            C. vertical            D. tensile
  6. Being a \_\_\_\_\_ material, wood has a fine property to withstand tension and compression in structure.  
A. stiff            B. fibrous            C. flexible            D. soft

7. The majorities of the interior spaces of residential houses as well as office buildings are in shape of \_\_\_\_\_.
- A. rectangle      B. round      C. square      D. triangle
8. As the first step in the process of designing, an architect usually draws a (an) \_\_\_\_\_ for the project.
- A. outline      B. weather map      C. working chart      D. skeleton
9. The long passage through a series of gates makes the worshippers who enter the great cathedral \_\_\_\_\_ arouse a feeling of holiness.
- A. consciously      B. pleasantly      C. specially      D. subconsciously

## Reading Material A

### The Study of Architecture

What courses do the students of architecture follow at their schools? The following illustrations are the common components of the subject of architecture at most schools.

In a five-year Bachelor of Architecture program, the primary concentration is design. In some schools "design" may be a required course every semester. It is almost always a studio course, and certain aspects of an actual or hypothetical architectural problem are emphasized.<sup>①</sup> The student finishes the project with a preliminary design solution for the problem, with a graph presented.<sup>②</sup> For centuries, "juries" of faculty and professionals have been used to discuss and evaluate the student solutions.<sup>③</sup>

Usually some non-architectural courses also play key roles in determining architectural solutions - the behavioral sciences, engineering (structural and mechanical), and economics are among the more obvious ones. While some schools have made concerned efforts to teach these and other disciplines in an integrated studio situation, in most programs the actual instruction is provided in separate, different courses.

A typical architecture program will recognize the importance of graphic skills, and early instruction will be given in freehand drawing and graphic delineation. Various media will be made use of, including pencil, ink, and color.

Many programs will require at least one course in basic design or composition before architectural design to develop a fundamental understanding of both two- and three-dimensional forms. This course (or courses) may conclude with direct application to a specific architectural problem, thus begin the transition to more complex design problems.<sup>④</sup>

Common to many schools is an introductory course in architecture, which may range from a sampling of various aspects of the profession to an overview of the historical development of man's building activities. In a sense it is a preview of future courses.

The problem of designing a structure to withstand the forces of gravity, wind, and earth-

quakes is usually taught through another series of courses. Most schools require at least one course in calculus and descriptive geometry before the introduction of engineering statics.<sup>⑤</sup> There may be an additional course on structural materials, particularly in engineering-oriented programs. The actual structures courses may be organized according to various sequences, such as the type of structural element (beam, column, etc.), or the structural material itself (timber, steel, reinforced concrete). Each material has different characteristics and requires separate considerations, but the ultimate objective in the engineering sense is to determine the most efficient (economical) system for the design solution. ( Obviously, the design affects the structural system and vice versa. ) Today most final structural calculations are done by specialists. It is not necessary for an architect to master it, however, an understanding is essential. Again, the emphasis in this area will vary widely from program to program.

Specialists exist for nearly every aspect of professional practice: programming, specifications, contracts, cost estimating, construction supervision, site planning, interiors, acoustics, lighting, heating and air conditioning, and electrical and structural design, to name a few of the most common.<sup>⑥</sup> And if you look through the catalogs of several programs you will probably find courses covering each of these and other subjects. They may be either required or optional, or may be integrated into a broader course such as “architectural technology”, “professional practice”, “contract documents”, or “building systems”. Fundamental to most programs is sequence of courses in architectural history, sometimes including “theory”. In a few cases these courses are taught in art departments, but nearly always include discussion of not only what mankind has constructed since the pyramids but how and why.<sup>⑦</sup> A thorough understanding of the differences in style and technology of our predecessors provides the foundation for understanding our present culture relative to its building needs.

## Notes

- ①设计课几乎始终是设计作业课,它对一个实际的或假定的建筑课题的某些方面加以强调。studio course 此处按意思译为“设计作业课”。
- ②(要求)学生完成该工程的初步设计方案,并绘制成图。本句中的 solution 一词在本文中多次出现,均指设计方案。
- ③长期以来,都是由教师和专业人员组成的“评审组”来审查和评定学生的设计方案。juries 是 jury 的复数,意为“评审组”、“陪审团”。
- ④这门课(或几门课)可以直接用于解决建筑方面的某一具体问题,从而开始过渡到解决更复杂的问题。  
句中词组 conclude with 本意是“以……结束”,此处引伸为“导致某一结果”。
- ⑤Calculus 微积分; descriptive geometry 画法几何; engineering statics 工程静力学。
- ⑥建筑工程的各个方面几乎都有各自的专家。最常见的有:任务规划、施工细则、合同签订、造价预算、施工管理、基址规划、室内设计、音响、照明、供热与空调、电气与结构设计等。

句中 to name a few of the most common 系动词不定式短语作独立成份，意为“提一下最普遍的几个例子吧”。

⑦……但是这些课程几乎总是包括了研讨自金字塔以来人类建造了些什么建筑物，而且是怎样建造的、为什么要建造。

## Reading Material B

### Modern Education of the Architecture

In the final decades of the twentieth century the course of study at a typical school of architecture consists largely of: four years at university level, combining history and theory of architecture with technical courses and design projects, leading to a professional degree. Next, three years of practical experience under a registered architect or engineer, followed by the state or national examination. This last may be taken several times if the applicant fails, or he may retake a part of it if that is all he has failed.<sup>①</sup> There is no disgrace connected with taking the exam several times. Some of our most glorious “name” architects have gone through the fire more than once. For those who, for one reason or another (no money, early marriage, etc. ), cannot attend a full time course of study, it is possible to work for an architect during the day as a draftsman and take two or three evening courses.<sup>②</sup> This generally takes up to twelve years and can play hell with one’s family life and health. If at the end of this time one passes the state exam, one deserves the shingle if anyone does.<sup>③</sup>

The schools themselves vary, of course, in the emphasis they put on the various aspects of architectural study. Roughly speaking, they fall into three categories:

1. **Traditional** The largest number of schools are still more or less traditional, in that they stress the design project method of study, using the technical and theoretical courses as auxiliaries to the central purpose, architectural design.<sup>④</sup> The hazard here is that these auxiliary courses, by the very fact of being placed in a secondary position, do not always get the attention they deserve, nor do the teaching posts tend to attract the best professors. Design, on the contrary, may often be overstressed, leading to a crop of architects whose work looks great on paper, but does not always turn out so well when built.<sup>⑤</sup> Nevertheless, it is hard to argue against the central point, which is that design is what architecture is all about.

2. **Bauhaus** A smaller number of schools take what is sometimes called the Bauhaus approach—named for the German school which early in the century revolutionized both the teaching and practice of architecture, giving us the new concepts of functionalism and honesty of structural expression, as well as a score of major architectural talents.<sup>⑥</sup> By this system students do not design until they have become tangibly familiar with materials of construction. They mix cement, build brick walls, and chisel away at stone—and when they design they use these materials in the clear and direct way their experience has taught them. The hazard here



is that the theoretical base of the system tends to become almost religious in its purity, and the leaders, or teachers, become minor (or major) gods. Actually, this particular phenomenon was often seen in the old days of the Beaux Arts, when students came to school for their lectures, but did their real work, their designing, in separate ateliers under separate masters.<sup>⑦</sup> In this case the adulation of the master was compounded by the pressure of competition with other ateliers and other masters.<sup>⑧</sup>

**3. Community** The third type of school, still fairly rare, is the one which feels architecture to be part of the general sociological process of mankind, along with economics, environment, and city planning. The design of an individual building, in this view, may only be considered in relation to the community as a whole, because that is the way it does, in fact, function. Hence, this school will stress urban studies, and the collection of data concerning race, income levels, employment, transport, and so on, as a background to design. In this case the hazard—there seems to be a hazard in any system—is that the background tends to become the foreground. The students learn to put together magnificent statistical reports but produce rather meager architectural designs.

Some schools have attempted to merge the three general approaches in an effort to achieve a balanced architectural education. It is too early, at this point, to judge their success or failure. At present, let us say, all methods have their virtues and shortcomings. The young architect will take his choice, and, if he is lucky, make up whatever his school has failed to give him during the early years of his own practice.

## Notes

- ①如果申请人考试不及格，他可以多次攻克这最后的一关，或者重考只是不及格的那一部分。
- ②draftsman：绘图员。
- ③...，one deserves the shingle if anyone does.  
.....如果他挂招牌的话他是有资格的。
- ④大多数学校差不多仍是学院式（传统性）的，它们强调学习设计方案的方法。技能课和理论课是主课、即建筑设计的辅助课。
- ⑤...leading to a crop of architects  
.....导致了一大群建筑师.....
- ⑥有一小部分学校采用包豪斯教学——因在本世纪初大幅度改革了建筑教学和实践的一所德国学校而得名。包豪斯教学法给我们提供了功能主义和真实的结构表现主义的新概念，同时它也造就了一批有影响的建筑学天才。
- ⑦Beaux Arts——花花公子艺术（又译：情人艺术），beaux 原系法语词。
- ⑧在这种情况下，对导师的奉承由于受到其它设计室里的导师的竞争压力而冲淡了。
- ⑨第三种学校更少。这类学校认为建筑学和经济学、环境学、城市规化学一起都是人类总的社会过程的构成部分。