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VOCATIONAL TRAINING FOR FURNITURE ^{1/}
AND JOINERY INDUSTRIES

by

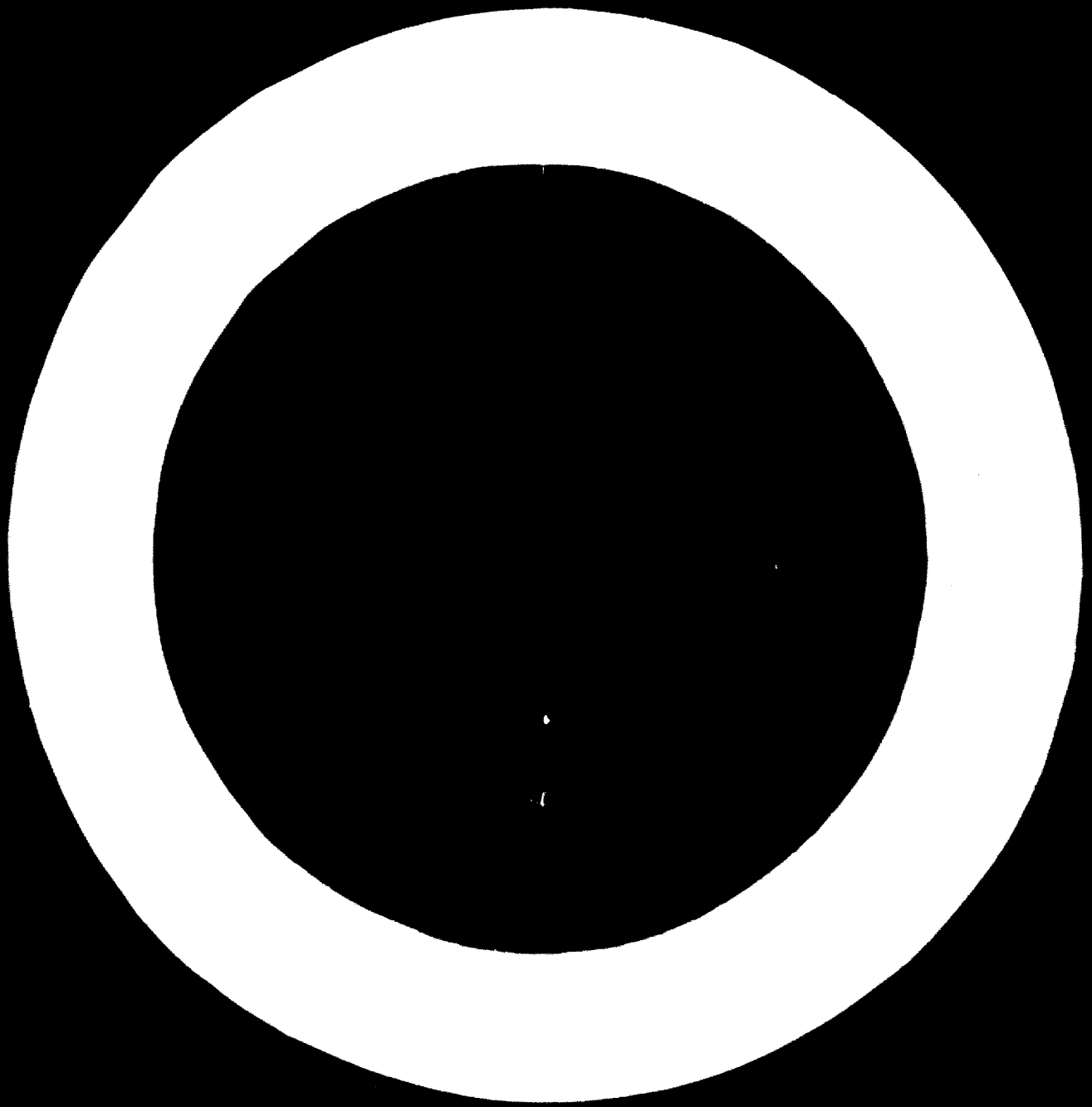
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Type and scope of training

The training for woodworking industries takes place almost exclusively in the trade schools operated by the government and the communes. The apprenticeship training has decreased during the last years and plays an insignificant role in this field.

The vocational training act from 1959 obliges the country communes to reserve one and the towns, depending on size, from 3 to 4.5 annual training places per one thousand inhabitants in their own or in the state trade schools. The same law defines furniture industries as one of the main fields for which training is to be offered in the trade schools.

Due to these obligations woodworking sections have been established in most of our general trade schools. According to information from 1971 there were the following number of classes and students starting the training in the furniture and joinery trades in the trade schools:

	classes	trainees
furniture and joinery	38	600
painting (furniture and building)	16	200
upholstery	2	30
tool maintenance	3	36

The courses have a duration of two years with the exception of tool maintenance which is a one year extension course after two years basic training in the other woodworking trades. Estimating that about one half of the trainees in the painting classes are

employed by the furniture factories, the total number of graduates in furniture and joinery industries is about 800 a year.

The capacity of existing training facilities is about 1000 trainees a year but some classes were not started and some others had not a full number of trainees due to difficulties in recruitment. At the same time other schools could locate only a part of their applicants. This strange situation results from the fact that the communal trade schools take trainees only from their own district.

Position of trade schools

For the time being trade schools are based on the 8 years compulsory primary school which is gradually changing to 9 years basic school. This means that the students entering training are now 14 or 15 years old and will be one year older in the future. The young age is generally considered as a disadvantage and the schools prefer older applicants because of their better motivation.

The possibilities for extension training are limited to two maintenance classes taking each 12 trainees a year. The technician or engineering colleges do not recognize vocational training but locate graduates in the same classes with those who come from the primary schools. The way to higher education is still closed unless the trade school graduates have a diploma from the middle school (9 years basic training).

In some other trades the graduates from trade schools have a two years technician training instead of the normal three years.

In the school reform presently taking place the trade school will be based on the 9 years basic school replacing the present primary and middle schools. Linking the trade school to the studies on the college or university level has been discussed, but no decision has been made so far.

Outline of programme

The trade schools offer rather broad basic courses in the main fields of industry. This applies to woodworking trades as well and normally there is no possibility for specialization during the training, but this is left to the schools of industry practically not existing in this field.

The tendency is apparently towards a broader basic training, which in many cases will be complemented by extension programmes varying from some months to one year.

The syllabi are based on weekly hour schedules which are approved and to a great extent determined by the Vocational Training Board at the Ministry of Education. A typical example of the distribution of weekly hours is shown below.

Subject	I year	II year	Extension courses
Practical work	16	24	32
Trade theory (technology, materials, tools, constructions etc.)	10	6	6
Trade drawing	2		
Trade economy		2	
Mathematics	4		
Physics and chemistry	2	2	
Mother tongue	2		
Social science		2	
Physical education	2	2	2
	<u>38</u>	<u>38</u>	<u>40</u>

The training is given in school workshop and classroom. Some schools have experimented with short practice periods in the factories immediately before the termination of the second school year.

Teacher categories

Teachers are divided into 3 categories according to subjects they teach.

Category	Subjects taught
workshop teacher (instructor)	practical work
teacher of trade subjects	trade, theory, math., physics, trade economy
teachers of general subjects	mother tongue, social science, physical education

In the typical industrial trades and construction the separation of trade theory and practical work and employing different teachers for them is a rule with very rare exceptions. In painting and tool maintenance classes the same teacher is normally teaching the practical work as well as the theory.

The integration of practical work and theory and assigning them to the same teacher has been mentioned as the long term goal by the training authorities, though there is no official decision on this.

Problems resulting from the separation of theory from the practical work are very typical in the Finnish trade training. Many remedies have been developed and tried on this without finding a satisfactory solution.

Teacher Training

The statute defines the following minimum entrance requirements for the different categories of teachers.

Category	Education	Practical experience
shop instructor	elementary school 8 yrs technical school 3 yrs	3 years after completed 18 years
trade teachers	middle school 9 yrs trade school 2...3 yrs	2 years after trade training
teachers of trade subjects	middle school 9 yrs technical college (B3) 4 years	2 years after technical college + 2 years before or during the technical training
teachers of general subjects	bachelor or master of arts or elementary school teacher's certificate and academic grade in the teaching subject	none

The selection procedure is carried out by the teacher training colleges' considering

- average of the technical school or college certificate (max 6 points)
- duration and type of the practical experience (max 5 points)
- results of the entrance examination (max 30 points)

Special attention is paid to the practical experience in the respective industry and unless this is satisfactory the candidates have to take a performance (work) test checking their practical skill in the key operations.

The newest training programme consists of a preparatory course of two or three weeks at the summer university (approbator certificate) and of six months full time training at the teachers' training college. The training course is divided into five sequences, duration of which varies from three to six weeks. One five week period is devoted to teaching practice in the selected trade schools under the supervision of experienced teachers.

The main courses and approximate numbers of hours in them are following:

Educational psychology	70 h
Applied pedagogics	50 h
Teaching technology (including teaching practice)	210 h
Administration of vocational training	15 h
Ergonomy	15 h
Mother tongue and speech training	50 h
Special work (thesis) and seminary exercises	20 h

In addition to this the trainees have to take at least two of the following 40 hours elective courses: planning of training, course construction, foreign vocational education, history of education, free-time activities, research methods, technical English.

During the last three weeks the candidates' teaching ability is evaluated while they are teaching a normal trade school class.

Leading pedagogical principles

In order to make the training as efficient as possible under the present circumstances the following principles have been emphasized:

1. Creating a normal working atmosphere in the practical work. About 90 per cent of the exercises consist of productive work coming from the customers or enterprises. The new training programme recommends the placement of trainees at the machines and other working stations (station teaching) and their rota-

tion at regular intervals. This arrangement would permit the organization the production in the same way as in a small factory.

2. Close co-ordination between the trade theory and practical work. A possibility for this is created by locating the classrooms close to the workshops and using common equipment in both of these.
3. Efficient use of teaching aids, especially the real objects in teaching of trade theory.
4. Developing an ability for reasoning, planning and problem solving in the trainees. For this purpose individual assignment, reports on laboratory experiments and in general "trainee-centered" methods are recommended.

The main problems for which the solutions are being sought are seen as:

- decreasing number of applicants resulting from the dropping birth rate and rapidly improving possibilities for other types of training;
- difficulties in co-ordination of the trade theory with the practical work which seems to require the integration of all trade subjects and assigning them to the same teacher;
- lack of appropriate training materials required by the modern teaching techniques (e.g. programmed and guided instruction and station teaching) - a problem due to the relatively small language group of trainees.

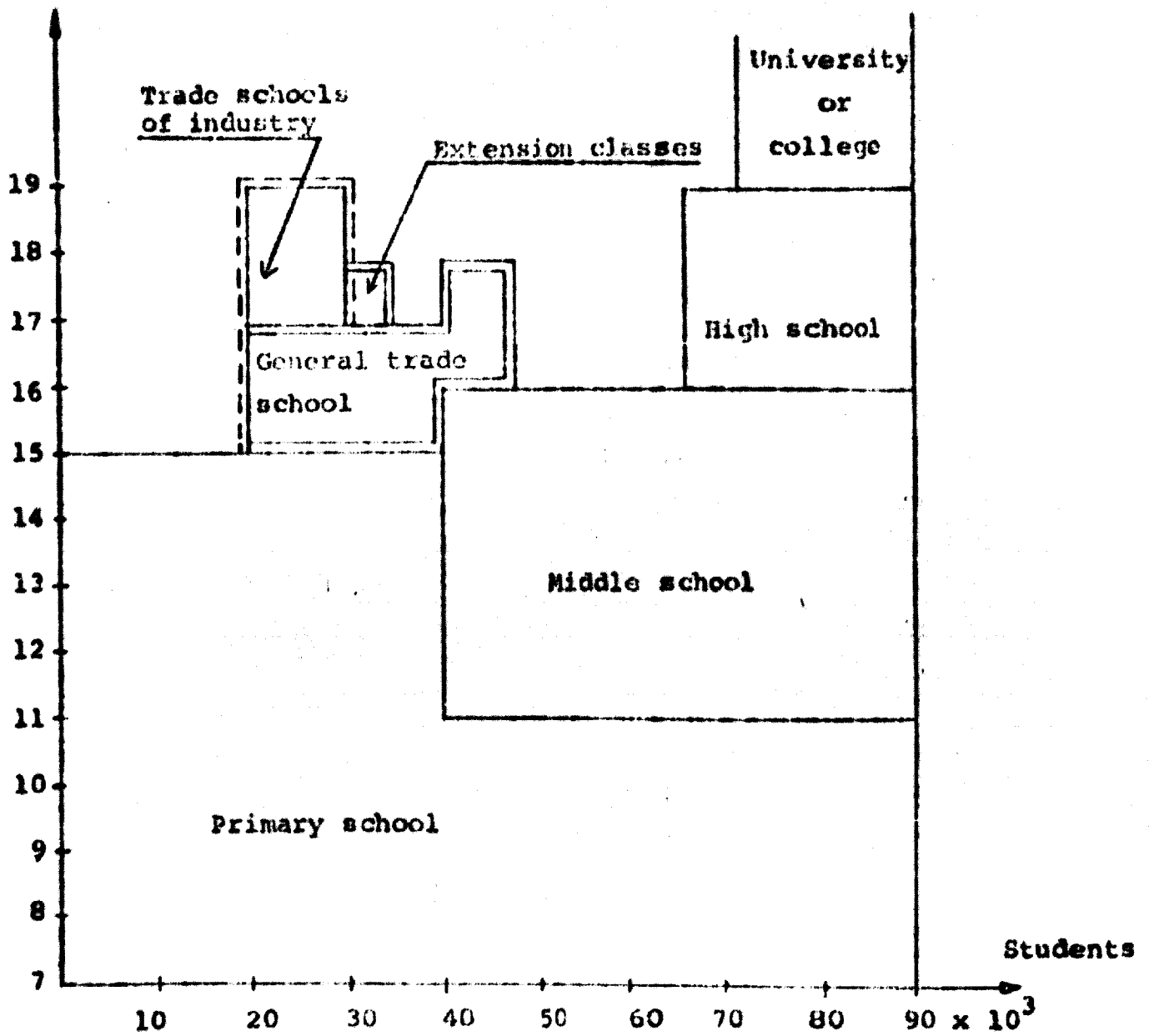


Figure 17.1. Present position of trade school

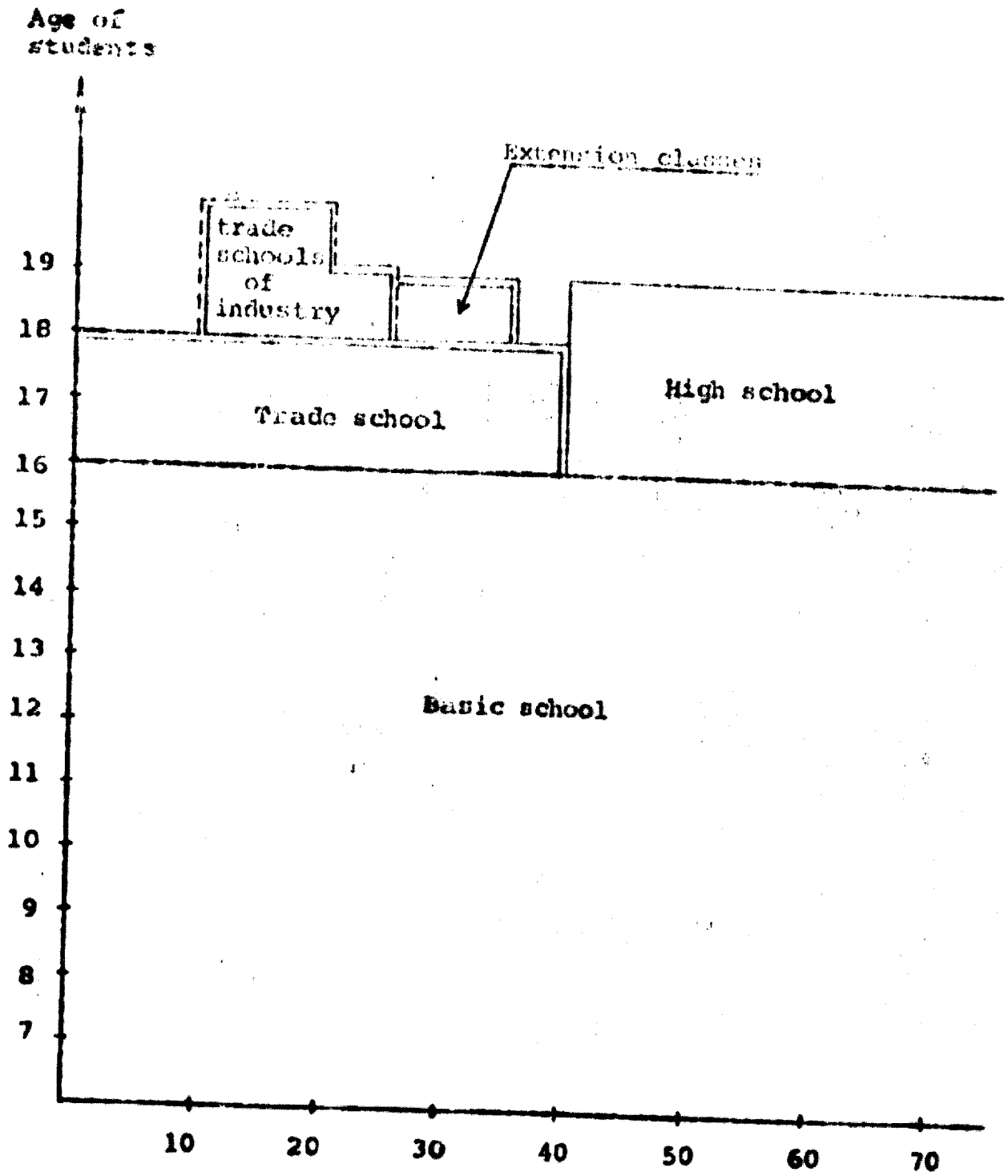


Figure 17.2. New position of trade schools

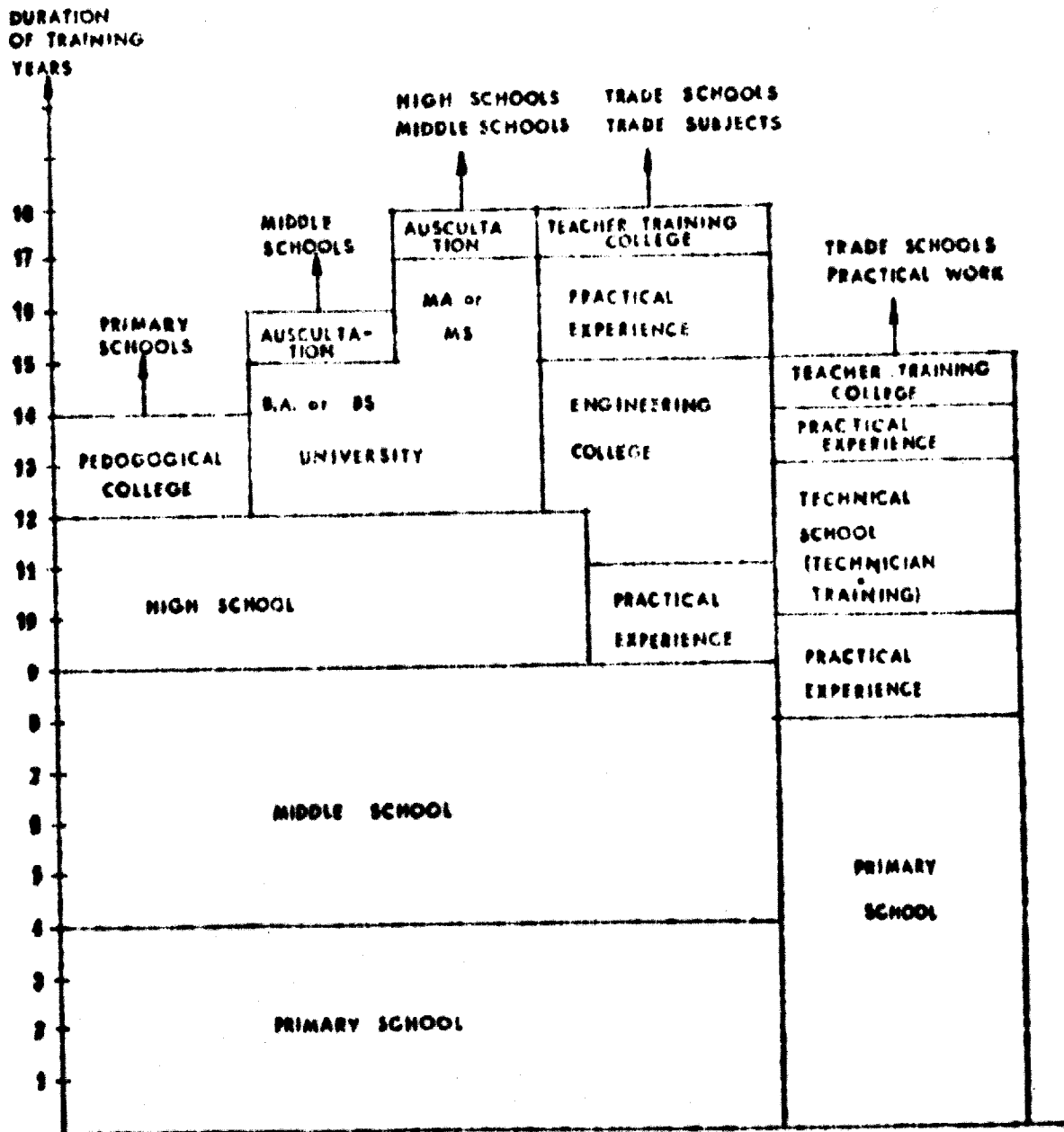


Figure 17.3. Present teacher training schemes

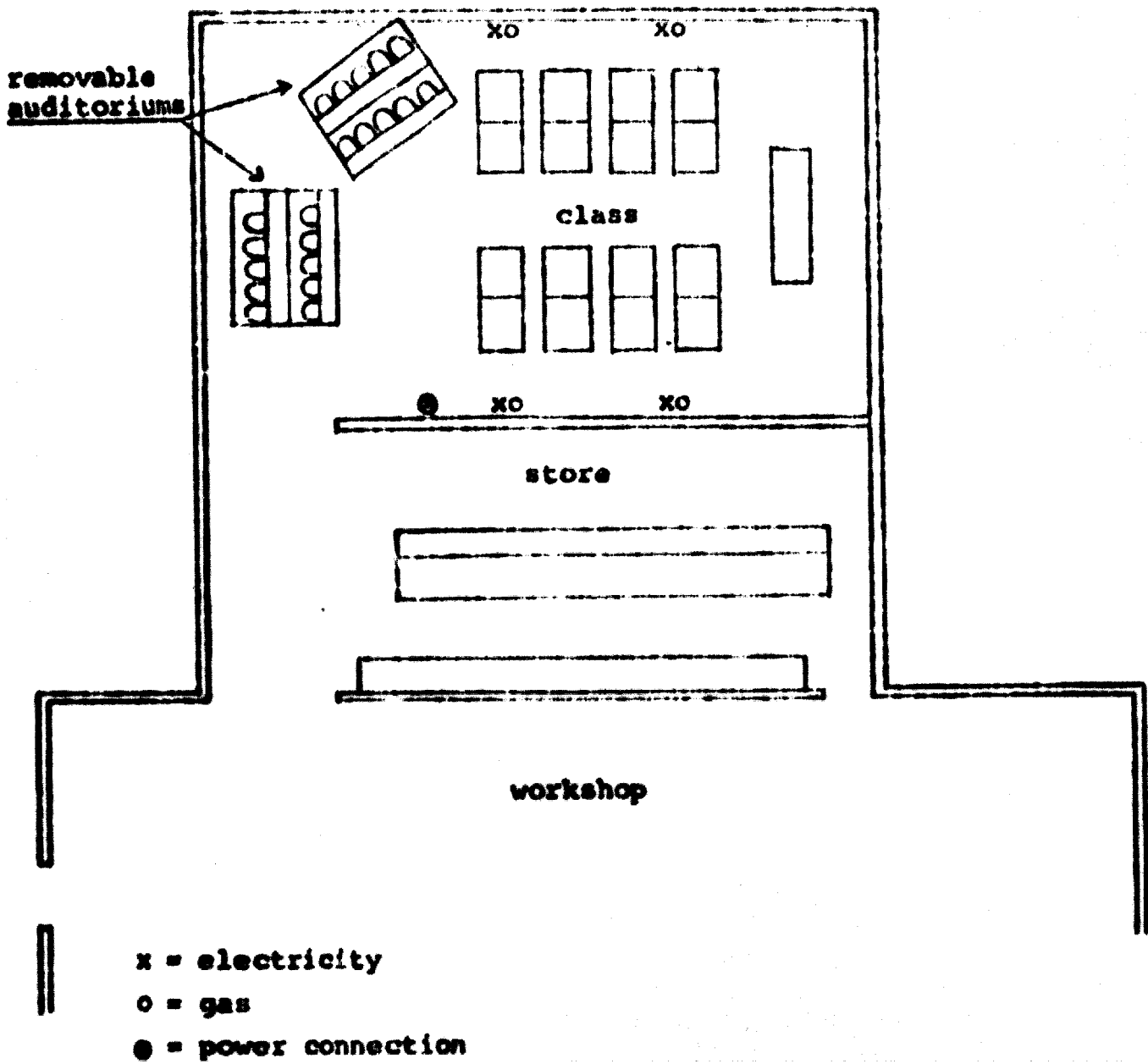
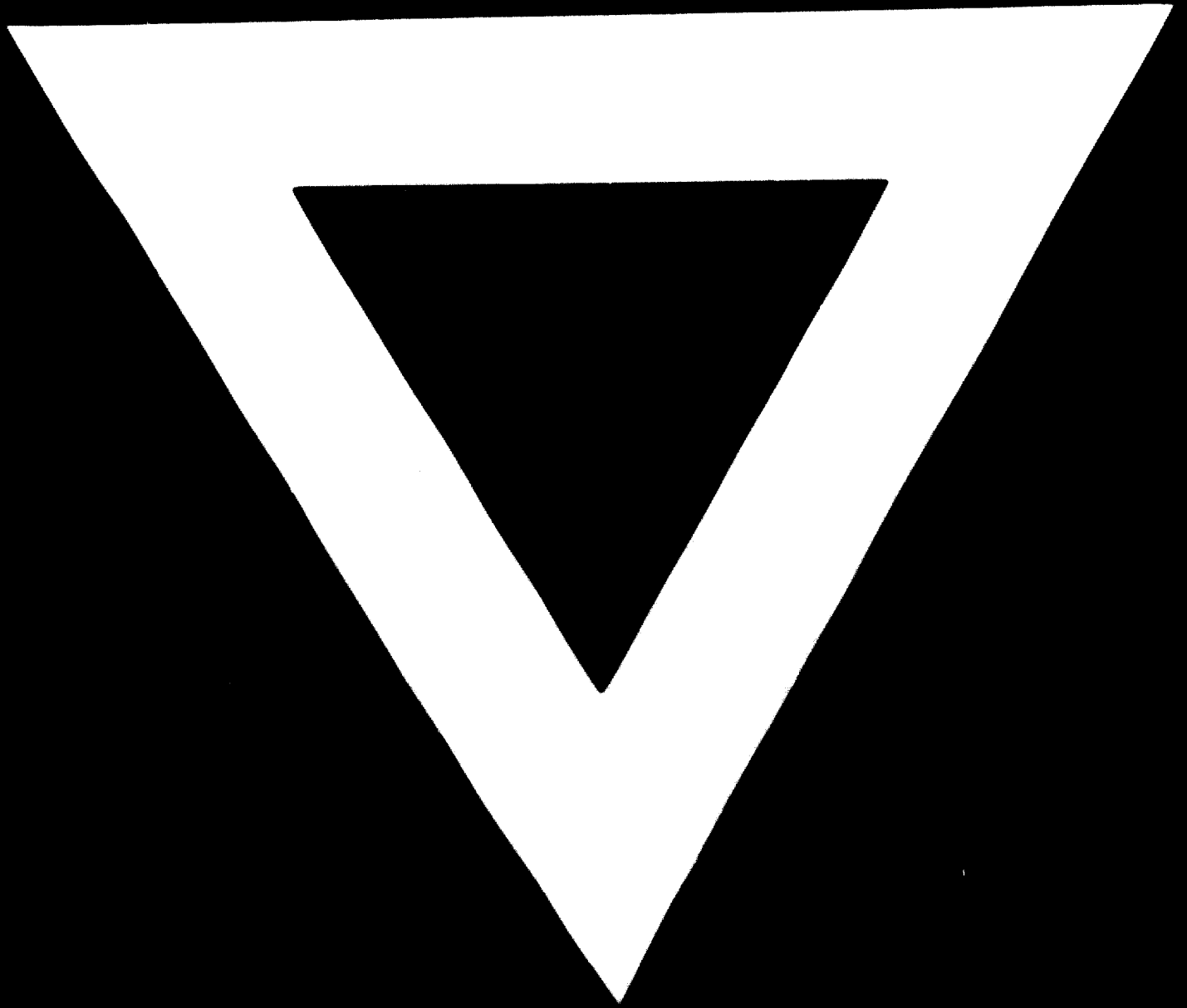


Figure 17.4. Principle of the recommended floor plan for teaching space



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