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ABSTRACT

The Process Analysis of Non-Grading (PANG) project began as a project for evaluating experiments with non-graded education in Stollet in the province of Varmland in western Sweden. Since then the project-work and design has been further developed and now also includes studying the school in its social environment. The project's main objective is to analyze the total situation and development of the pupils in a nongraded school system and in the alternative which would be actual if the small school is closed. This alternative would be a graded system in a school far away from home. In this situation the pupils get even farther daily-travelling than they are used to, or they have to live at a boarding house during the week. Presenting an orientation of the work on different levels of the project, this report discusses: (1) the PANG-project and its place in the Swedish School Research Program; (2) the organization of non-graded education in Stollet, a small lower secondary school in Varmland; (3) the organization of non-graded education in Hallen, a small lower secondary school in Jamtland; (4) non-graded teaching in general subjects in Hallen; (5) non-graded teaching in English in Solberg; and (6) non-graded instruction in small rural lower secondary schools. A listing of 56 reports from the PANG-project is also included. (NQ)

Reports from

THE INSTITUTE OF EDUCATION

UNIVERSITY OF GÖTEBORG

23

Non-Graded Instruction

Research organization and design.
Administration and daily teaching
experiences in small rural lower
secondary schools.
Experiences from the PANG-project.

Paper read at the INTERSKOLA
conference in Sweden, July 1976

Anders Bachmann (Editor)

August 1976

INSTITUTE OF EDUCATION, UNIVERSITY OF GÖTEBORG Fack S-431 20 MÖLNDAL SWEDEN

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Annika Andrae (Editor)

No 56

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CONTENTS

1. Introduction

By Annika Andrae

The Ninth International Conference on Education in Sparsely Populated Areas, INTERSKOLA '76, was held in Sveg, Sweden, July 13th - 21st 1976.

According to the program of the conference the following directions were given:

The main purpose of the conference

Better understanding over the national boarders of school policy problems in sparsely populated areas.

The main theme to concentrate on

School as an activating factor in natural life in sparsely populated areas.

The main items to be discussed

- Society planning in sparsely populated areas.
- Cultural and educational conditions in sparsely populated areas in Sweden.
- Sparsely populated areas and
  - Recent reforms of the Swedish school system and their effects on primary and secondary education.
  - Adult education and university extension courses.
  - Education as an instrument in cultural policy.

The INTERSKOLA conference is an association for people from european countries. It was started nine years ago as an inservice-training-course at King's College in Aberdeen, Scotland. Participants in the INTERSKOLA conference meet once a year. Some european country has up to this year been host for the year. The participants are discussing educational problems in sparsely populated areas of the country where the conference is taking place.

The discussion-items are presented and focused by lecturers giving the background to the problems in their own country. Teachers, headmasters, school directors, school administrators as well as researchers use to visit the conference.

The PANG-project*, which stands for Process Analysis of Non-Grading, (Andrae and Dahllöf 1973) has been represented at three meetings of this conference.

INTERSKOLA, 1973	by	Annika Andrae
Alta, Norway		Fil.lic. University of Göteborg
INTERSKOLA, 1974	by	Annika Andrae
Golspie, Scotland		Fil.lic. University of Göteborg
		Sandy Konradsson
		Headmaster, Stöllet
INTERSKOLA, 1975	by	Per-Erik Eriksson
Bangor, Wales		School inspector
		The National Swedish Board of Education

Experiences and outlines of the project have been lecturered about and discussed at these conferences.

The INTERSKOLA conference was invited to take place in Sweden in 1976. The place of conference was Sveg in Jämtland. The conference was administered by the County Board of Education in Jämtland and financial support given by the National Board of Education. Andrae and Eriksson, taking part of earlier meetings of INTERSKOLA, gave advice and guidances to the content of the program. The conference program is presented in appendix 1.

During the planning of the 1976' meeting in Sweden a presentation of the PANG-project was suggested. The program for the review of the PANG-project was supposed to take one day (including discussion groups in the afternoon) and presented under the following headline: Nongraded upper stage of compulsory schools in Sweden.

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* The PANG-project is funded by the National Board of Education
Scientific leader: Professor Urban Dahllöf
Project director: Fil.lic. Annika Andrae

The presentation should give an orientation as broad and deep as possible of the work on different levels of the project. That is to say, within this frame we wanted to describe not only the research and school work but also the collaboration between different institutions, for example the National Board of Education and the University, in dealing with research and development in school, a system rather specific for Swedish school reform work and interesting for our colleagues abroad. We also wanted to present the cross-institutional collaboration within the project. This is often claimed for but seldom carried out in research-work. Within the PANG-project this collaboration is carried out by the Department of Education, University of Göteborg [1] and the Department of Geography, University of Umeå.[2] Problems in focus for this work is 'Society planning and the localization of school for sparsely populated areas'. These questions were supposed to be discussed and given priority the day before the presentation of the PANG-project, forming a bridge to the educational situation and showing the close interaction of the problems. Due to circumstances unknown to me there was no person invited from the Department of Geography, Umeå, to present this part of the problem. I cannot but complain this gap in the presentation of analyzing the problem and in describing the way we work in order to try to describe and explain problems very important to us. The collaboration between the departments is taking place in several different parts of the research work for example defining the specific problem areas and field work (interviews a.s.o.). It will be of great importance in summarizing and analyzing the data as well.

We wanted to give a presentation of the research program incorporating the above stated dimensions (Andrae and Dahllöf ibid). Meeting the needs of those participating we also wanted to present experiences from the daily work in those schools working according to some form of a nongraded system. These real life pictures should be given from the administration and organization of the nongrading school as well as from the teaching - learning situation on the part of the teachers' work: planning lesson, follow-up work a.s.o. Due to these intentions the final program for the presentation of the project included:

- -

1) From July 1, 1976, the headquarter of the project has moved to the Department of Education, University of Uppsala.

2) Hammarberg, B. (1974)

I The PANG-project and its place in the Swedish School Research Program (Per-Erik Eriksson).

II Non-graded instruction in small rural lower secondary schools. A presentation of the PANG-project (Annika Andrae).

III The organization of non-graded education in Stöllet, a small lower secondary school in Värmland (Sandy Konradsson).

IV The organization of non-graded education in Hallen, a small lower secondary school in Jämtland (Jon Göransson).

V Non-graded teaching in general subjects in Hallen (Erik-Artur Egervärn).

VI Non-graded teaching in English in Solberg (Anna-Lena Edlund).

These presentations were followed by group discussions focusing on: Upper stage schools as cultural institutions.

The presentation of the research program by A. Andrae point II above is reported in a separate report (Andrae, A. 1976) as well as in chapter 3 in this report.

The other presentations (point II, IV-VI above) are revised and put together by A. Andrae in this report according to agreement from each one of the lecturers.

As to the content of the different chapters the following persons have contributed:

Chapter 1 Annika Andrae
Chapter 2 Per-Erik Eriksson
Chapter 3 Annika Andrae
Chapter 4 Sandy Konradsson
Chapter 5 Jon Göransson
Chapter 6 Erik-Artur Egervärn
Chapter 7 Anna-Lena Edlund

In putting these different lectures together within the same report, I have tried to keep as much as possible to the presentation during the conference. Thus some information in the different chapters in this report overlap.

2. The PANG-project and its place in the Swedish School Research Program

By Per-Erik Eriksson

What happens when you close the post-office, the cooperative shop and withdraw bus-lines and trains is being studied since many years. But what happens when you close the upper stage of the small school and have to bus the pupils to a central school or have them boarded away from their homes? The effects of that has not been a subject for research until now.

PANG stands for Process Analysis of Non-Grading. It started as a project for evaluating experiments with non-graded education in Stöllet in the province of Värmland in western Sweden not far from the Norwegian border. The project-work and design has been further developed since then and now the intentions are also to study the school in its social environment.

After this very brief introduction, which will be elaborated more later on, the place of the PANG-project in its organizational environment will be pointed out (figure 2:1).

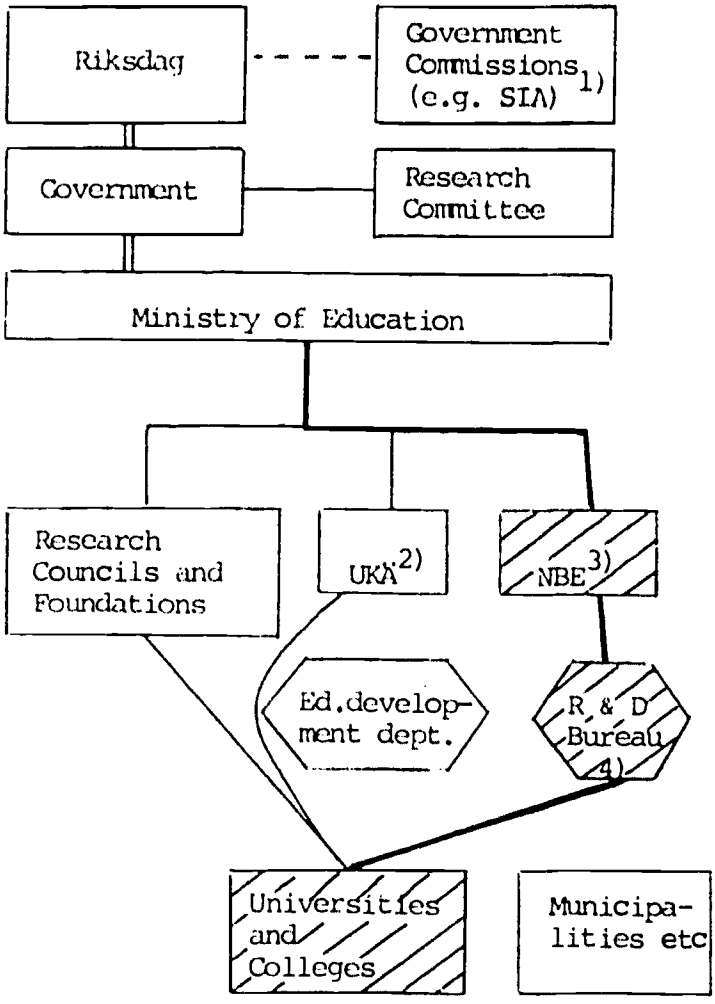

Figure 2:1 The organization of research and development work

Goals, Priorities, Allocations	The general outlines of Swedish research policy are determined by the Riksdag and the Ministries. Over-riding questions concern research are dealt with by the Research Committee. The appropriation is distributed via the Ministry of Education to research councils and foundations, to the Office of the Chancellor of the Swedish Universities (UKÄ) and to the National Board of Education (NBE).
Allocations	This is where decisions are taken concerning the concrete research projects to be supported and awarded allocations. Both the Office of the Chancellor of the Swedish Universities and the NBE have special units responsible for the administration of research allocations.
Research projects	Most actual research takes place at the institutes of education of universities and schools of education.

I think you are a little familiar with SIA.[1] The SIA-committee suggests in its report a more flexible system within which it is possible to use the resources more freely. Some of those ideas have already been tried in the PANG-schools according to a special permit, given by the government.

Within NBE [3] there is a special bureau for research and development, the R & D-bureau [4]. People no longer accept closing schools. There is a claim for decentralization and cooperation in taking local responsibility. In order to get more knowledge about what happens, when you work in an "alternative school" that is to say in this matter a non-graded one, the NBE decided to sponsor the PANG-project. The evaluation program was proposed from the University of Göteborg (Dahllöf och Andrae 1973). The work is carried out by U. Dahllöf, professor, and A.Andrae, fil.lic.

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1) SIA = Skolans arbetsmiljö = The working environment in school (SOU 1974:53)
2) UKÄ = Office of the Chancellor of the Swedish Universities
3) NBE = National Board of Education
4) R & D = Research and Development

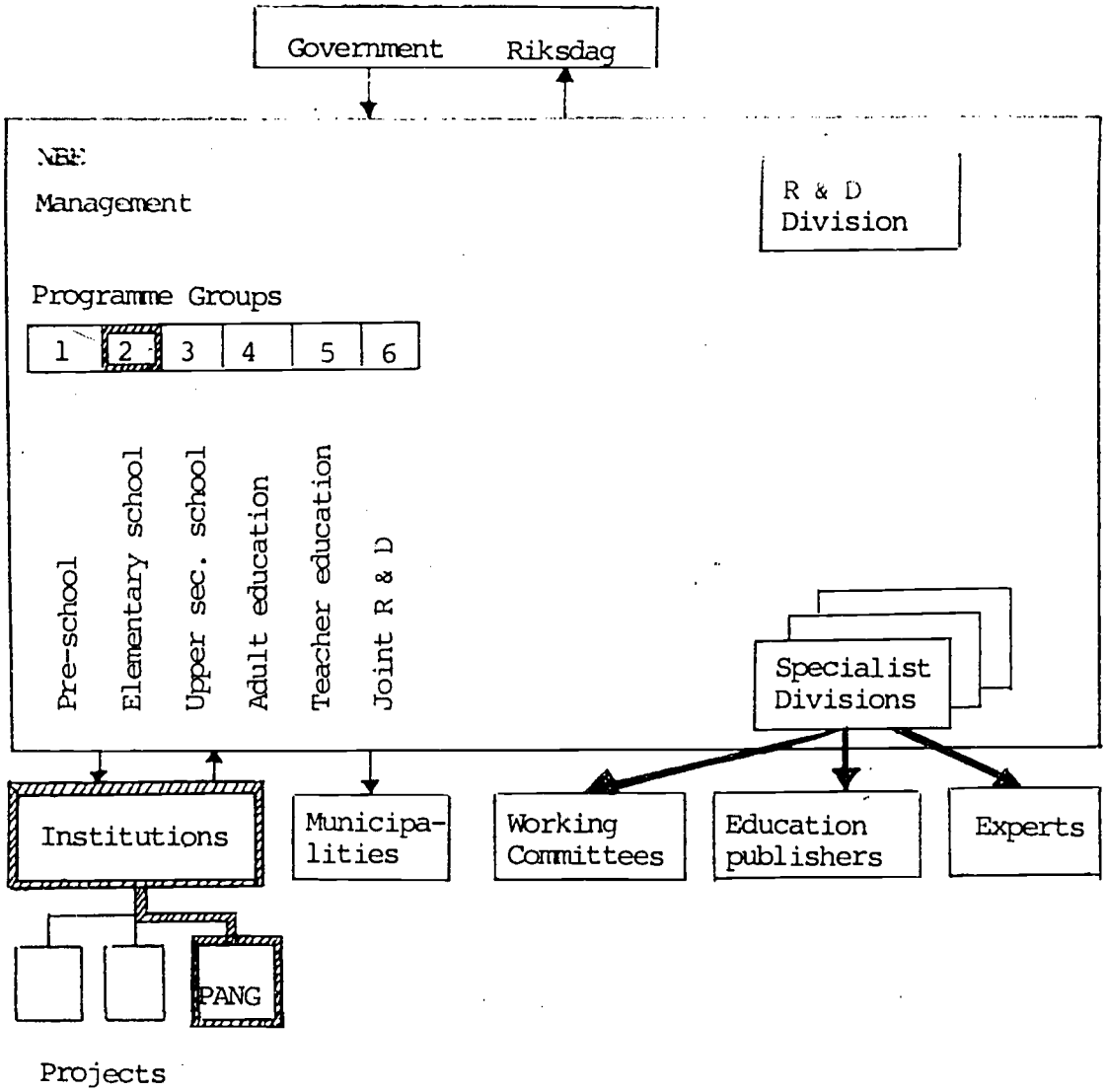

Figure 2:2 The administrative structure dealing with educational research within the NBE-area

Figure 2:2 goes a bit further into the administrative structure dealing with educational research within the NBE-area.

A. Goals

The principal goals of R & D at the NBE are determined by the Government and Riksdag. The purpose of R & D is to support long-term planning and the implementation of school reforms.

B. Programmes

The NBE is responsible for its programmes. The general guidelines for these programmes are laid down by the Management and the Education Committee. There

are five programmes for the educational sectors and one for joint R & D. The R & D Division, L 3, serves as the drafting, co-ordinating and managing body in each programme group.

C. Execution

Most R & D work is conducted outside the NBE, although the management of projects can be retained by the NBE or entrusted to research institutions. Research is based on the behavioural science institutions of universities and the educational research institutions of the teacher training schools. Development work of various kinds is done by municipal authorities and other organizations, by teaching teams and by experts of various kinds.

The programme goals for the Research and Development work done by the NBE are as follows:

Elementary school

- to improve the state of knowledge concerning the realization of the goals of the curriculum through teaching and learning, with special reference to the interests and attitudes of the students
- to improve the state of knowledge concerning the organization and environment of elementary school, by analysing different school environments together with the circumstances of student learning and the effects of instruction in alternative forms of organization
- to improve the state of knowledge concerning the environmental conditions in school and outside it which favours the personal and social development of the students, and in the light of this knowledge to develop and test measures of instruction and student welfare, particularly for students suffering from various kinds of handicaps
- acting on the basis provided by the elementary school curriculum, to plan, construct and evaluate models and prototypes of teaching aids and to develop models and procedures for the selection of teaching aids and the utilization of the total teaching aid resources of schools
- to evaluate central fields of elementary school activity and to develop new aids for the evaluation of student development study motivation and study achievement.

What has happened within the society? We have had a very strong wave from centralization towards decentralization. It is sometimes called "The Green Wave", which means that people leave the urban areas for the rural ones, because they want to leave the densely populated areas. They believe in the future of the sparsely populated area and they also believe in decentralization.

We have been going over from a more centralized society to a more decentralized one. And you cannot speak about society without talking about school.

Some of the ideas about decentralization have grown within the field of the established decision-making but some ideas have come from the ex-parliamentary groups in the Swedish society. They do not prefer centralization any more. They want to move out. Let the children stay in their nearby village-school. Children should not be bussed to a central school!

The curriculum of 1962 favoured a rather strong centralization. The new one from 1969 makes it possible to give the pupils all more options within smaller school-units.

Curriculum 1962 contained a lot of option groups in grade 7 up to nine groups in grade 8 and in grade 9 the old classes were split up into different tracks. That system made it necessary to work within rather big school-units.

The curriculum 1969 gives just a few various alternatives. There are two courses in English and Mathematics, and there are five optional subjects - Germany, French, Arts, Economy and Techniques. The organizational work is now much easier, and it is easier to fulfil the programme with school-units consisting of 3-4 parallells.

I am sure most pupils take the disadvantage of having a limited choice of subjects if they can have the advantage of going to their home school, instead of being bused or lodged.

The optional subjects stand for a very little part of the curriculum (fig. 2:3).

There has been a close cooperation between the research team and the school authorities. The five experimental schools have got a special permission to use the resources more freely. They have manipulated a little with the teaching periods. Certain gains in general - subjects have been used to create a more generous language program, for example.

Since the start of the evaluation program of the PANG-project, a decision has been taken by the government, which says that in small schools with 1-2 parallells you shall give one optional subject of theoretical and one of more practical character, without considering the existing administrative regulations.

What happens to the community when you close a school? This is another question. The PANG-project is cooperative with the University of Umeå, which has a long experience of research in sparsely populated areas, about withdrawing railways, post officies etc and now they have also started research about schools. This part of the project is called Geo-PANG, where Geo stands for Geography.

SUBJECT	Periods/week in					
	Gr 7		Gr 8		Gr 9	
	P	T	P	T	P	T
COMPULSORY SUBJECTS						
Swedish	3	4	3	4	4	5
Mathematics	4		4		4	
English	3		3		3	
Music	2	2			1	1
Drawing	2	2	2	2	1	1
Handicraft	2	2	2	2	1	1
Dom. science			3	3	2	2
Physical Ed.	3	3	3	3	3	3
GENERAL SUBJECTS	10	13	10	13	10	13
Social science + Nature science						
OPTIONAL SUBJECTS	4		3		4	
FREELY CHOSEN WORK	2		2		2	
Σ	35		35		35	

Figure 2:3 Curriculum in grade 7, 8 and 9

3. Non-graded instruction in small rural lower secondary schools
A presentation of the PANG-project

By Annika Andrae

Introduction

The PANG-project (PANG = Process Analysis of Non-Grading) was started at the Institute of Education at the University of Göteborg. From the 1st of July 1976 the project will be continued at the University of Uppsala [1]. The project is carried out by means granted by the National Board of Education. Its central objective is to contribute to a deeper understanding and knowledge of the functioning of the Swedish school system. Results and experiences from the project are to be used within the continuous reform work of the development of the Compulsory School Curriculum with focus on the smaller secondary school. Keeping the school up to date, so to say, or in another way: Meeting new problems and trying to solve them.

Lately the school problems in the rural areas have been subject to much discussion. This is due to a combination of different factors, namely the centralized school curriculum, the organization of which often is more suitable to schools of a certain number of pupils and the decrease of the rural population due to rationalization and centralization.

Great distances to service, place of work and social contacts are endemic features of the rural areas. Small schools, fewer and fewer pupils, long rides between home and school or to board and lodge in the main town for the pupils is another problem. This has been a problem to an increasing number of schools during the latest decade.

Pilot study

The PANG-project was initiated from experiences in a small-school-pilot study of a nongraded school system (Andrae 1971, 1972, Andrae & Dahllöf 1973). This small school had suggested a nongraded upper of comprehensive school (pupil age 14-16 years). Positive preliminary results from this pilot study and theoretical and methodological development in earlier projects (Andrae 1972, Dahllöf 1971, 1974, Lundgren 1972) then formed the basis for the later PANG-project.

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1) University of Uppsala, Department of Education, Box 2109,
752 24 UPPSALA

Objectives

The main objective of the study is to analyze the total situation and development of the pupils in a nongraded school system and in the alternative which would be actual if the small school is closed. This alternative would be a graded system in a school far away from home. In this situation the pupils get even farther daily-travelling than they are used to, or they have to live at a boarding-house during the week. These different alternatives or frame situations for pupils in rural areas are described in figure 3:1.

Figure 3:1 Frame situations and comparison groups for pupils in graded and non-graded schools

Frame situations	Pupils living situation	School Community	Pupil transportation	Teaching model
Traditional: 1	At home	Local school	Rather short	Grading
Alternatives: 2	At home	Local school	Rather short	Non-grading
3	At home	Central school	Very long	Grading
4	Boarded	Central school	None	Grading

The analysis of the total situation can be looked upon as encompassing two main areas:

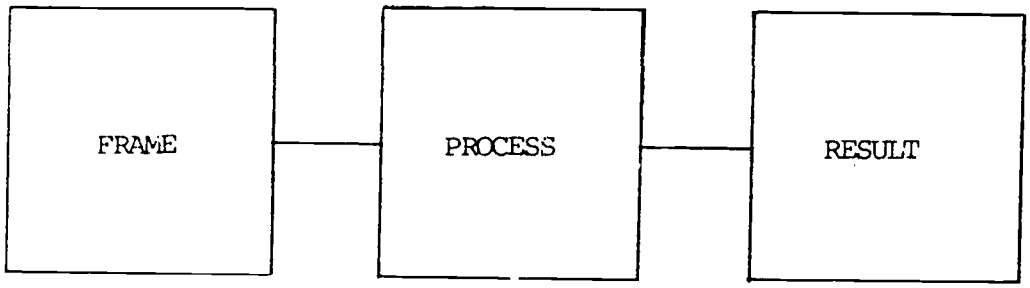
1) the instructional situation - factors concerned with the school, that is to say the educational process in the nongraded system and its effects on pupil attitudes and knowledge in comparison with a traditionally graded system.

2) the social situation - factors which take into consideration how the pupils' situation at home, among friends and within the community will change when you change from one teaching system to another, from one living place to another. These are factors like living and transportation circumstances, family relations, spare time business, peer relations and so on.

This project will apply principles of process- and pupil-analysis elaborated within earlier project work (Dahllöf ibid, Lundgren ibid) and further developed in the above mentioned pilot study (Andrae a a). From a theoretical point of view the nongraded system is interesting as a special case of a more individualized curriculum, the opposite of which is class teaching, where the pupils to a greater extent are taught collectively.

The experiment can also be described as a special frame situation for a follow-up study of a curriculum reform, where the main point will be the analysis of didactic problems and time-consumption under changed organizational patterns. This analysis is necessary in order to understand and discuss later results of achievement as well as attitudes. This discussion can easiest be understood in the following simplified model (figure 3:2).

Figure 3:2 Model of process analyses

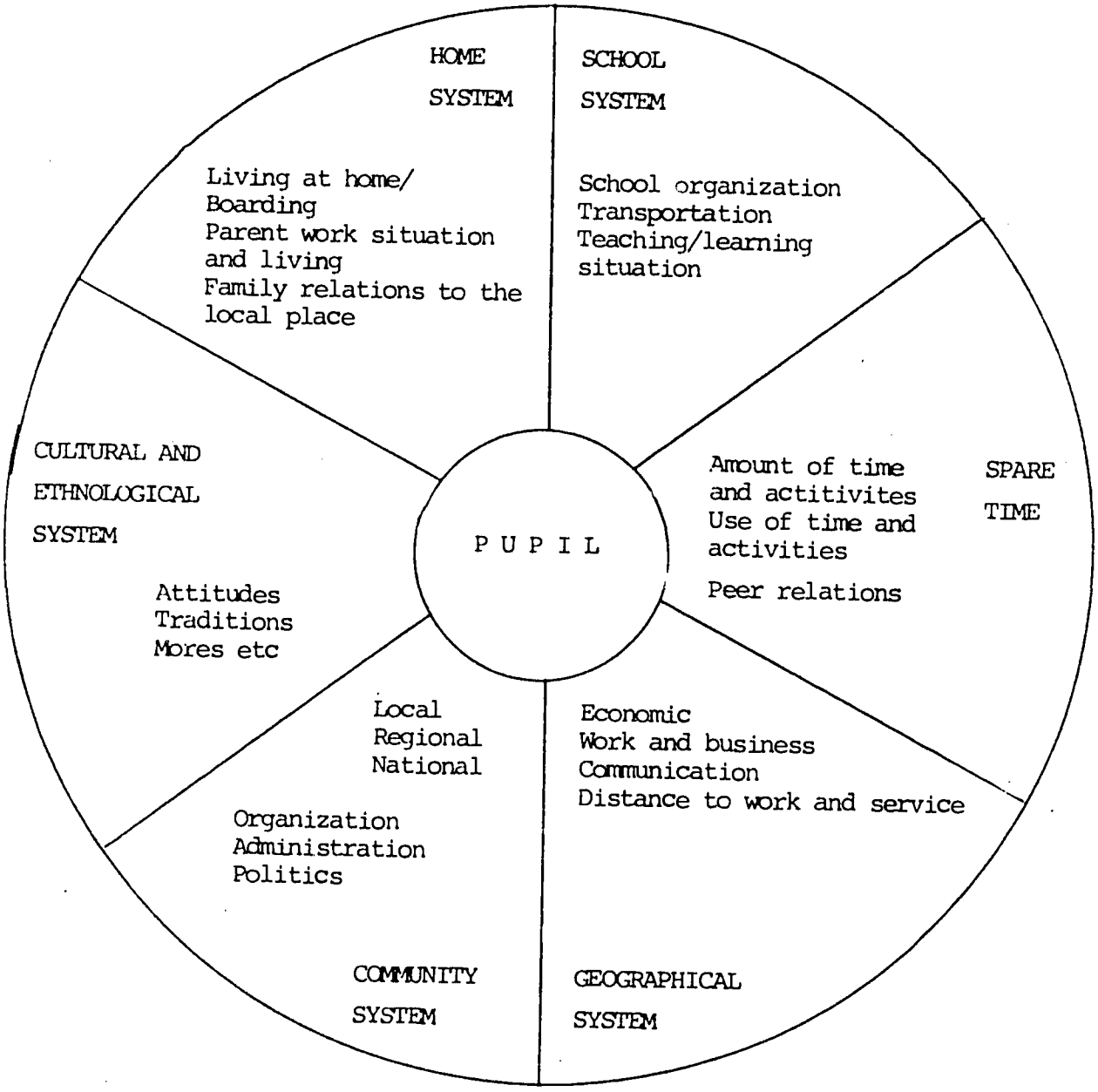


The same discussion can be applied to the social situation of the pupils, that is to say that there are possibilities as well as limitations for them to use their spare time, make their choice of leasure-time activities, work as well as studies and living alternative after compulsory school and as grown-up. These factors are to be found in their neighbourhood: the place where they live and the surroundings. Central factors in this part of the study will be time consumption for bus-rides to school, the extent of organized and informal activities, as well as in what extent these are used by the pupils etc.

This part of the study has close connection with geographical work concerned with time budget studies (Hägerstrand 1970, Andrae 1975), and ethnological studies of activity fields (Hogan 1973) are of a central interest. Another is the ethnological dimension of ideological and cultural ties to the district, where our secondary school pupils live. It is also close to the studies of guidance and vocational choice. Interdisciplinary cooperation is extremely important when the research problem is a concrete social community problem as well. Even if this problem contains a clear instructional question, it is at the same time just one part of greater totality, which can be illuminated from many points and in many sciences. Dynamics of behaviour and attitudes has to be explored within the context behaviour and attitudes of the individuals making up the life of a particular community. Thus, this is also an ecological study, where behaviour is conceived as an interactive process of environment and person in which the environment exercises a supporting, guiding or coercive influence (Campbell 1962). Realizing these ideas, an interdisciplinary cooperation with experts of cultural-geography at the University of Umeå is carried out (Hammarberg 1974). A summary of the totality discussed above is visualized in figure 3:3. The model is elaborated from that of Campbell (1962).

It has been possible to isolate a number of different components in the various parts of this model, for example the home situation and the community life, which are sensitive to such changes as a withdrawal of the upper grades. These factors have been studies by questionnaires and interviews to a selection of people.

Figure 3:3 Model of factor-sections of the total situation of pupils living in different school-districts



Experimental schools and the choice of comparison groups

In the PANG-project a nongraded system at the secondary level has successively been worked out in five small schools since 1972. Four of them are one-class schools and one of them a two-class school.

Comparison schools have been chosen from districts of the same economic, social and employment structure (Table 3:1). In the comparison schools the figures in the brachets indicate the selection of classes taking part in the project. These classes mostly contain pupils, who are living at a boarding-house in the central village during the week.

In figure 3:4 the schools have been located on the map of Sweden. The longer school-rides in the mountain district as well as the boarding situation in some of the comparison schools are geographically presented in diagram 1 and 2.

Table 3:1 Number of classes and pupils in the experimental and control-schools 1975/76.

Experimental schools			Comparison schools		
District schools	Number of Classes	Pupils	District schools	Number of Classes	Pupils
Forest district			Forest district		
RAMSJÖ	3	46	FREDRIKA	3	30
SOLBERG	3	48	MOSKOSEL	3	42
Mixed district			Mixed district		
STÖLLET	3	63	LIMA	6	111
HALLEN	3	77	RÄTAN	3	56
			SVENSTAVIK	13 (6)	338 (150)
Mountain district			Mountain district		
TÄRNABY	5	108	VILHELMINA	15 (3)	421 (78)
			SORSELE	8 (3)	183 (63)
			ARJEPLOG	8 (3)	173 (69)

Figure 3:4 Map of Sweden. Location of experimental and comparison schools.

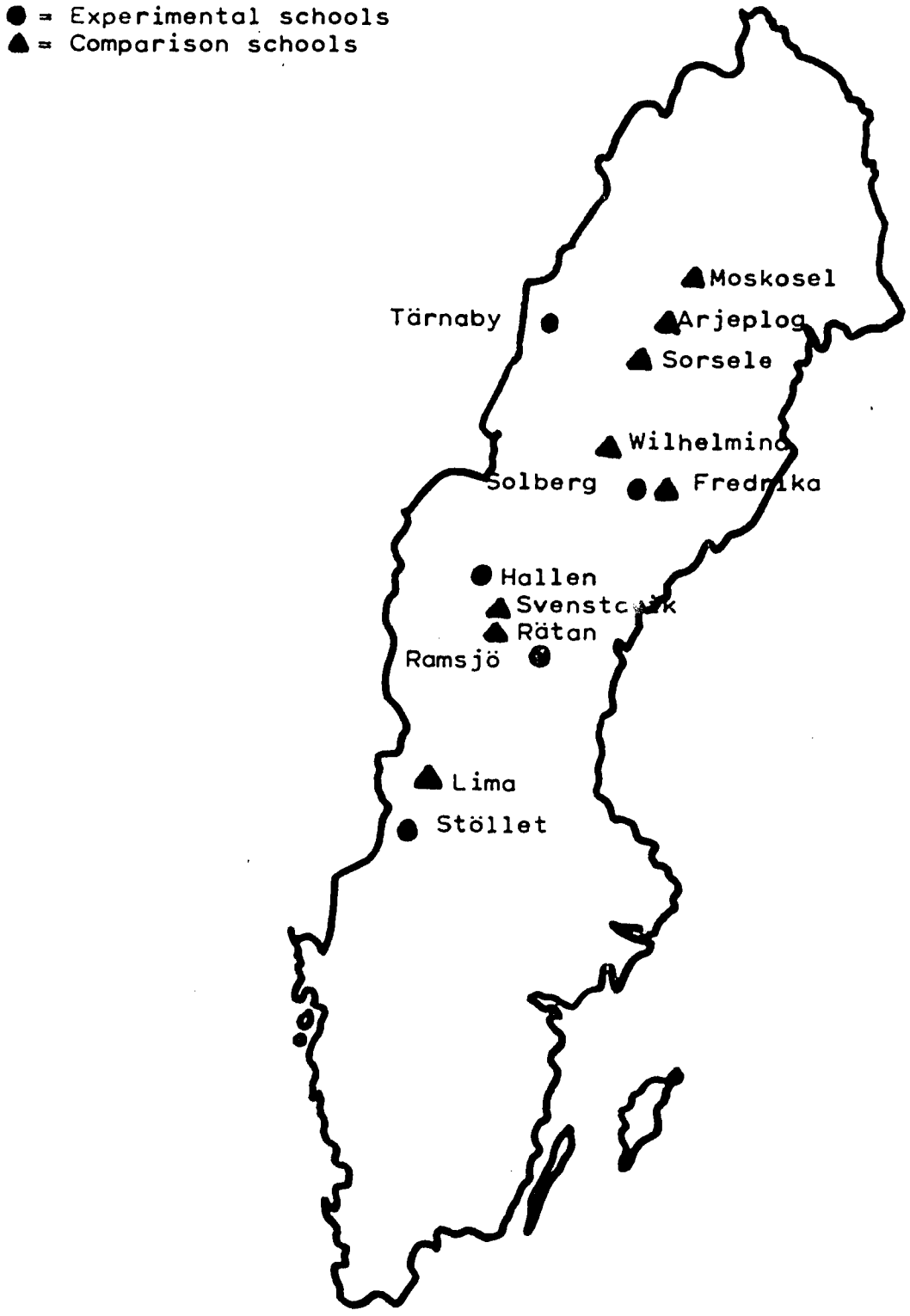


DIAGRAM 1. EXPERIMENTAL SCHOOLS. PUPILS LIVING AT HOME, TRAVELLING AND BOARDED.

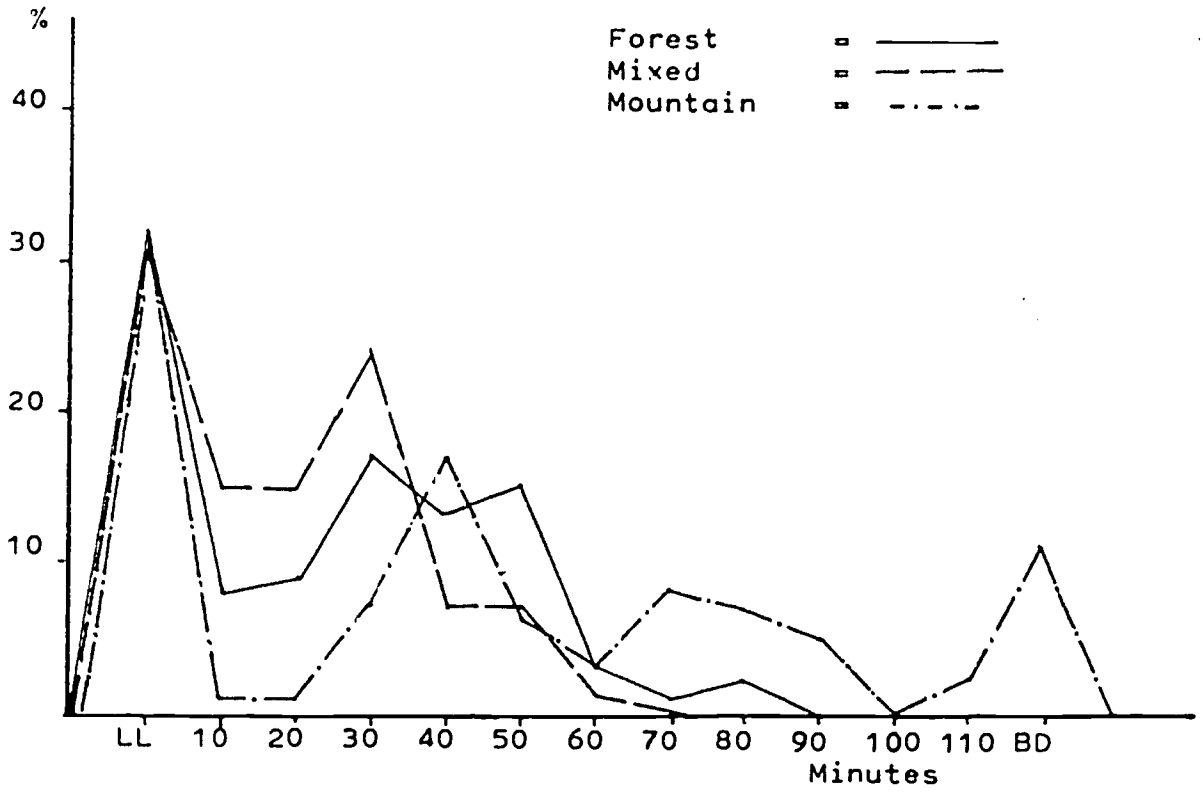
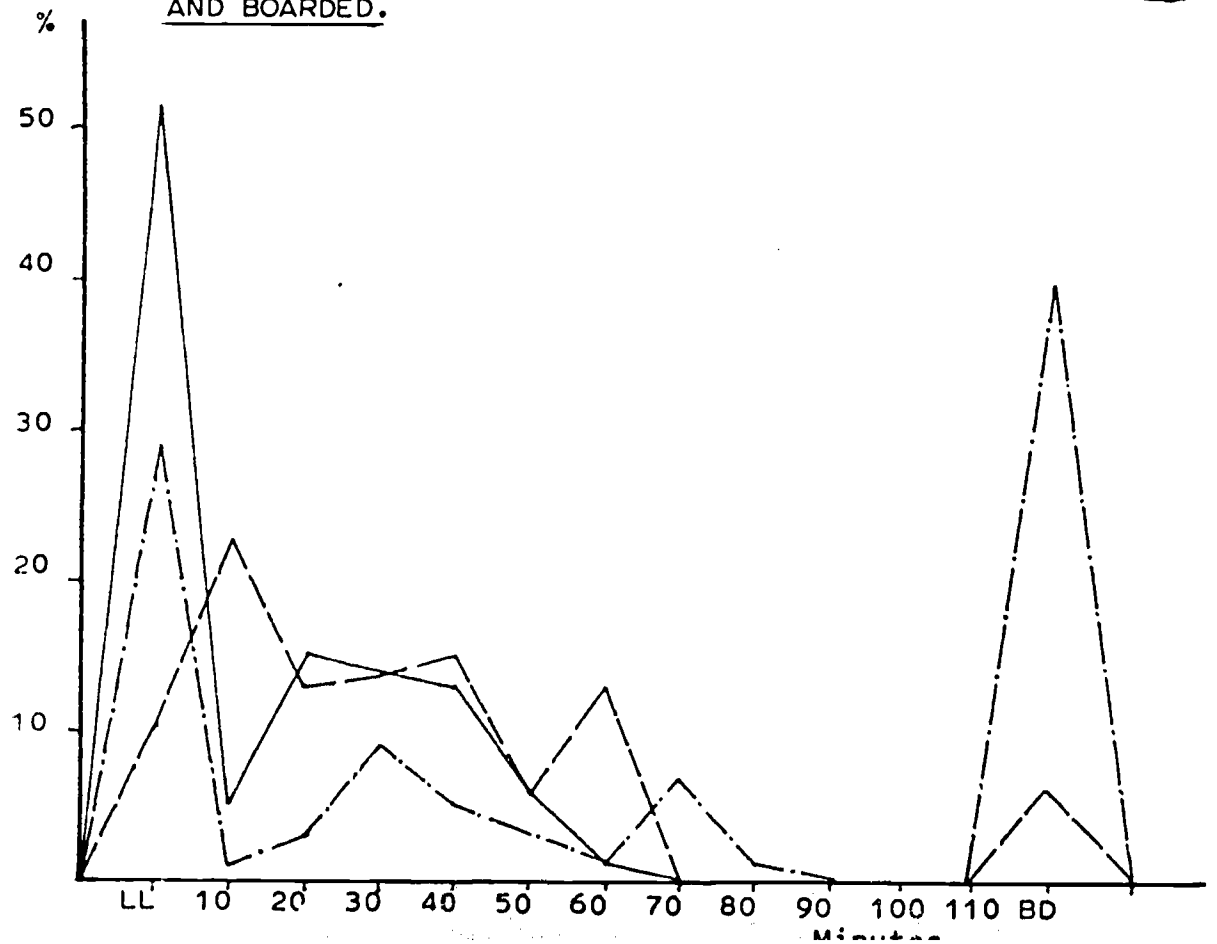


DIAGRAM 2. COMPARISSON SCHOOLS. PUPILS LIVING AT HOME, TRAVELLING AND BOARDED.



General design during the session 1975/76

During the session 1975/76 the main field work within the schools has taken place according to the following design (Figure 3:5).

Figure 3:5 MAIN STUDY OF THE PANG-PROJECT SESSION 1975/76.

Session 1975/76

$A_{E,F}$ →	C,D	C,D	C,D	B
Sept. -75	Autumn	Winter	Spring	June -76

A. BASIC DATA

Teachers grade 6, 74/75
Pupil data grade 7 - 9, 75/76
Documents
School principals

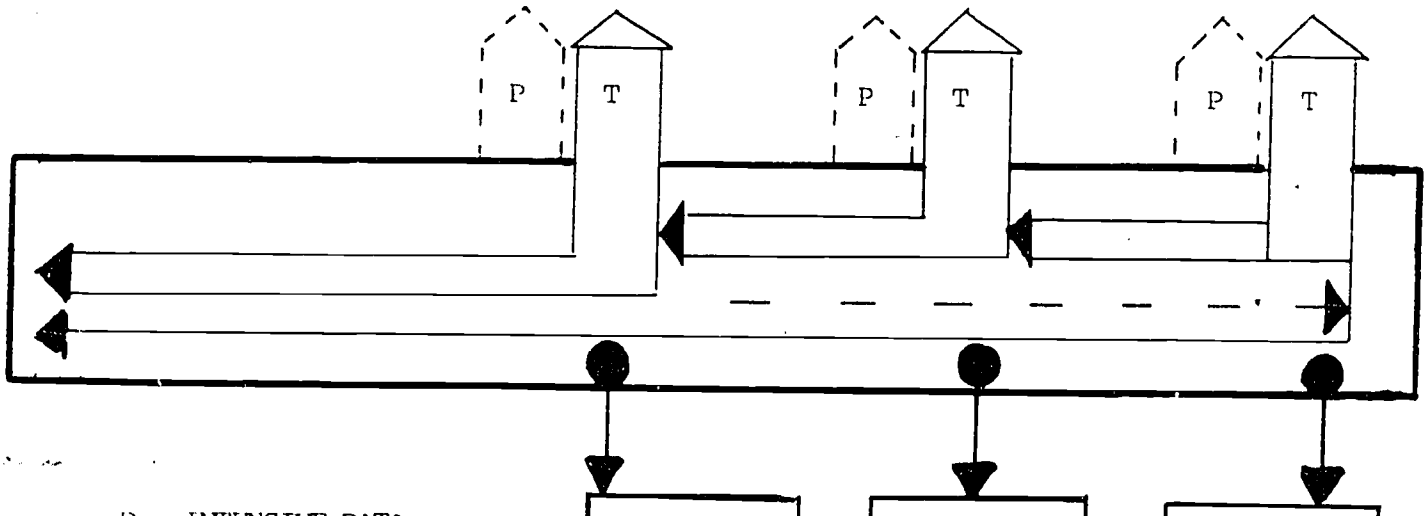
B. SUMMING UP DATA

Teachers grade 7-9
Pupils grade 7-9
Documents
School principals

C. EXTENSIVE DATA

Teachers (T)

Pupils (P)



D. INTENSIVE DATA

a) Educational process
Teachers
Pupils

b) Social situation
Pupils
Parents

Boarding home
Youth-leaders
Other people/organizations
working with pupils

SAMPLE of subjects and lessons	SAMPLE of subjects and lessons	SAMPLE of subjects and lessons
RANDOM SAMPLE	RANDOM SAMPLE	RANDOM SAMPLE
	Leaders and assistants in the local school place	Leaders and assistants in the local school place

E. COMMUNITY DATA — Community leaders, Community school people, Documents

F. REGIONAL DATA — Regional school people, Documents

According to the model, the main points of the program have been the following:

A. BASIC DATA. Sept. 1975

1. Teachers grade 6, 74/75: Working process and experiences.

2. Pupil data grade 7-9, 75/76: Questionnaires (attitudes, social climate and school work experiences) and achievement tests.

3. Documents: Achieved data about pupil-progress and background.

4. School principal: Description of the school and administration concerning planning etc for the session.

B. SUMMING UP DATA. June 1976

Data from point A 2 - 4 have been followed up in a somewhat more detailed way.

C. EXTENSIVE DATA

1. Teachers. Three times during the year, teachers teaching Social- and Natural Sciences, Swedish, English and Math have got questionnaires about their teaching up to this date and their plans for the rest of the year.

2. Pupils. At the same time, the pupils have answered questions about their school work, peer-relations, spare time activities, bussing, choice of subjects, future plans and so on.

D. INTENSIVE DATA

a) 1. Teachers. Through sampling of lessons, the same subjects have been visited by observers three times during the session: The working situation in the class has been observed through time-sampling. After the lesson some questions have been put to the teachers concerning this specific lesson.

2. Pupils. At the same time the pupil situation has been observed.

3. In some of the experimental schools a successive registration of the work situation has been completed by the teachers as well as the pupils.

b) 1. Parents and pupils living within different distance from the local school place have been interviewed about their living situation, attitudes to different aspects of school, work situation, belongingness to the district, daily/weekly business travelling, school-travelling and the future for themselves and their children.

Different living situations of parents/children are represented in these samples, namely:

Living situation			Daily travelling
BD	=	Boarded pupils	
ET	=	Pupils with extremely long daily travelling	(60 min. -)
LT	=	Pupils with rather long daily travelling	(35 - 40 min.)
NT	=	Pupils with normally long daily travelling	(10 - 30 min.)
LL	=	Pupils living in the local school place, not travelling	

2. Other people interviewed about activities and other parts of the social situation for the pupils are:

The hostess of the boarding-house
Leaders and assistants of different organizations in the district
Cultural agencies
Social agencies
Church agencies
The police
School leaders
School hostess
School nurse
School psychologist
School social worker
and so on

E. COMMUNITY DATA

Economical, political, social and cultural data are collected in cooperation with cultural geographers at the University of Umeå and cultural data even to a certain extent in cooperation with ethnologists in Göteborg.

F. REGIONAL DATA

The same as under E. Some of these data are also concerned with contacts with the regional school board.

Summary comments upon the design and main study

Within this design empirical data have been collected and observation-studies have been carried out constituting the basis for further analyzing and broadening our knowledge of the above stated problems.

The analysis of these data will start this autumn as the empirical work has just been carried out.

There are a lot of practical, organizational and didactic experiences already made but not yet documented throughout the work within the project. However, these are extremely important to concentrate on and further discuss already in this conference.

Therefore it is a pleasure to me to give the floor to some of my co-operators in the experimental schools, principals as well as teachers. They will focus on and enlarge some of the instructional parts in the above presented evaluation program.

4. The organization of non-graded education in Stöllet, a small rural lower secondary school in Värmland

By Sandy Konradsson

In Sweden there are about 20 senior level schools with less than 30 pupils in each grade; 1980 there will be about 40 - if they won't be closed.

Reports are often published telling us how expensive these small schools are: too many teachers, too expensive material a.s.o. There are not enough optional subjects for the pupils, few trained teachers ... You could find a long list of supposed disadvantages. But in recent years people have started to discuss the possibility of a positive milieu in the small school and the advantages for the pupils to live at home, not making too long daily travels or to live at a boarding-house in the central village.

Stöllet is situated in Norra Ny, a community with a small as well as sparsely located population. It is a typical forest community. Many people are short of job and leave for other places. Although some industries are built up lately, probably people - specially young people - will continue to move also in the future.

Now to the compulsory school in Stöllet. Before 1970 there were more than 30 pupils in each grade, but the number of the pupils dropped and the following year there were 14 per year. In the future the number will vary considerably, 12 - 30 pupils per year.

The risk of closing our school war large. What was to be done? The teachers in the school and the headmaster analysed the problems and proposed different actions, which they discussed with people from The County Board of Education and from The National Swedish Board of Education.

Among the different alternatives of action was the following:

1. A senior level, where grade 7-8 respectively were organized into two units.

2. A senior level, where the whole level grade 7-9 was organized into one unit.

3. A senior level located to the central village with long daily travels for the pupils and for some of them to board at the central place.

The school staff decided that alt. 2 was the best one for our school and began working with the main intention to keep the senior level at our school.

Knowing that these problems were not unique to the school of Stöllet and that decisions were to be taken about the future of the small school, The National Board of Education turned to the University of Göteborg to discuss the evaluation of this form of school organization. An evaluation program was formulated from the Department of Education, University of Göteborg (Andrae and Dahllöf 1973).

At the same time the teachers in Stöllet cooperated with specialists from The County Board of Education and from The National Board of Education and formed a program for the non-graded education.

At an early stage in the discussion and in the work, some problems appeared to be very important to deal with and to solve to make a non-graded system possible. These problems seem to be of worth to take up and to discuss here one by one.

1. Time schedule

   The time schedule is decided by Government and is the same for any grade and senior levels in Sweden.
   A condition for pupils from grade 7-9 to have the possibility of working together is that they all have the same time in every subject. The schedule was organized so that they all have the same timetable (table 4:2).

2. Options

   According to the central curriculum pupils should have the possibility to make an interest option of one of the following subjects:

   German, 3 years
   German, 2 years
   French, 3 years
   French, 2 years
   Technology
   Economics
   Art

To be allowed to start a group it is decided by Government that at least 5 pupils of each grade choose the same group. This could be a problem for a small school with few pupils. Are the pupils in sparsely populated areas forced to choose among fewer subjects? Yes, within a common organization, but not in a non-graded system.

In Stöllet the problem was solved by making pupils from all grades work together and by using differentiated learning material. Due to the number of pupils, the pupils' ability to work by themselves and the type of optional subject, the pupils were organized into 1 - 3 groups. For example Economics: one group, German: three groups a.s.o. An example of the timetable will be given later on.

3. Timetable

Table 4:1 gives an example of how the timetable arrangement can be solved.

Table 4:1 Timetable. Monday 08.40 - 11.40

Time	MONDAY		
08.40			
09.00	Technology 1)	General subjects 2)	French 3)
09.20	"	"	"
09.40	"	"	German 4)
10.00	"	"	"
10.20			
10.40	Technology 1)	General subjects 2)	German 4)
11.00	"	"	"
11.20	"	"	"
11.40	"	"	"

For example, 25 pupils from grade 7-9 have chosen technology. The teacher can arrange the pupils into two groups. Teacher and pupils together decide what they want to study. E.G. Group 1 (independence of grade) can work with a volvo-motor, Group 2 with electricity a.s.o.

The teacher in German - French has 3 groups in German and 2 in French. She arranges those pupils who work well together and have about the same knowledge to the same groups. Those pupils who are not studying these subjects are working with general subjects.

4. Individual studies in general subjects

The whole system is built up around individual instruction in general subjects. The optional subjects group their pupils and the rest of the pupils study general subjects.

Studies in general subjects are planned as follows:

Knowledge that the pupils have to learn during their 3 years in senior level is divided into small units - "fields of interest" - for example The Antique, The Electricity a.s.o. The teachers have to decide which of those fields that pupils from grades 7-9 can study together. We thought The Antique was all right but The Electricity could be problematical. This subject is cumulative and pupils must have earlier knowledge. Everyting that the pupils are supposed to study in these 3 years has been penetrated in this way. Mostly they can study together, just a few fields are cumulative and in these fields the pupil must be grouped. Thus a course of study was made. Now educational material was a great problem. How and where to get differentiated and individualized material? Some material has been made by the teachers themselves and some has been bought. As the pupils can use tape-recorder, TV-recorder a.s.o. themselves, the teachers have time and possibility to arrange for stimulating fields.

The pupils work for themselves - normally groups of 2-4 pupils. The teacher doesn't teach in a general meaning, that is to say collectively to a whole class, but walks around, stimulates, discusses, answers questions, guides a.s.o.

5. Teacher position

In Sweden a senior level teacher generally has been educated in two subjects at a university and then has got one year training at some teacher-college. Thus the teachers have their specialitites and are not very fond of teaching subjects, in which they have not been trained. This is a problem for the small school. The small number of pupils does

not allow but a few teacher positions and teachers have to teach more than two subjects, that is to say not only "their own". Thus you could say that it is difficult to get qualified teachers in every subject. However, by a special Government decision in the small school you are allowed to employ teachers with several subjects in their examination or teachers, who can work on several levels, in the first hand. Due to the non-graded timetable in Stöllet teachers with the following subject combinations are needed:

Swedish - Social subjects
Mathematics - Natural subjects
Foreign languages
Physical education in combination with out-of-class activities
Music " " " " the church
Technique " " " " the community engineer

For teachers in other subjects arrangements can be made together with other schools. Thus compulsory school can have one part of a position. From this follows that the teachers sometimes have to travel. This is very common for the study-guidance-teacher-position for example.

6. State and community grant

In Sweden we receive state grant for the teachers. The community is responsible for the rest of the costs. The number of teacher hours can be reduced by having the pupils studying together. Due to a special decision from the NBE we have a normal number of teacher hours in Stöllet. In Sweden, The County Board of Education decides the exact number of teacher hours in each subject. The school in Stöllet has a special permission to use these hours according to the special needs within the school.

As to learning materials we only need a few of each: microscope, books of reference a.s.o. The pupils don't study the same thing at the same time. Due to that the material won't be so expensive.

Summing up the experiences on part of the teachers as well as the pupils, they have been very positive. The above presentations are some experiences from a small school on its way towards a non-graded educational system. A picture of how teachers in this school experience their situation in this school-development work is presented in figure 4:7.

Table 4:2 Timetable. Ordinary curriculum and non-grading, grade 7 - 9

SUBJECT	MINUTES / WEEK							
	GRADE 7		GRADE 8		GRADE 9		Σ 7 - 9	
	Ordinary curriculum	Non-grading	Ordinary curriculum	Non-grading	Ordinary curriculum	Non-grading	Ordinary curriculum	Non-grading
SWEDISH	120	135	120	135	160	135	400	405
MATHEMATICS	160	160	160	160	160	160	480	480
ENGLISH	120	120	120	120	120	120	360	360
MUSIC	80	40	-	40	40	40	120	120
ART	80	65	80	65	40	65	200	195
HANDICRAFT	80	65	80	65	40	65	200	195
HOME ECONOMICS	-	65	120	65	80	65	200	195
PHYSICAL ED.	120	120	120	120	120	120	360	360
GENERAL SUBJECTS	400	400	400	400	400	400	1.200	1.200
OPTIONAL SUBJECTS	160	145	120	145	160	145	440	435
FREELY SEL.WORK	80	80	80	80	80	80	240	240

Figure 4:1 A functional teamwork within the Swedish school-system with the possibility of single teacher-pupil-influence on national decisions

5. The organization of non-graded education in Hallen, a small rural lower secondary school in Jämtland

By Jon Göransson

In spring 1972 the senior level unit of compulsory school at Hallen was offered to take part in the PANG-project and elaborate a non-graded educational situation. After sounding the interest of the employees involved at school, the local educational committee gave its permission.

In autumn 1972 a work unit was formed, consisting essentially of the whole staff teaching the pupils of senior level. The experimental schools had not been given any definite directions, so to begin with the work unit would have to precise what non-grading might mean to the local school and why such forms of education were to be searched for.

The following list of tasks was drawn up:

1. Trying to establish an exact aim for the experimental activity.
2. Trying to revise the timetables of the senior level (as shaped in the central standard curriculum) and adapt them to the local school.
3. Trying to revise and adapt syllabi.
4. Establishing range and need of resources and looking for possibilities to assign resources differently.
5. How to cooperate in work and positions.
6. Methods of work.
7. Trying to find suitable educational material.
8. Construction of schedules.
9. Information to pupils, parents, employees, the local education committe etc.

The aim was formulated as follows:

Trying to find working- and activity forms which make possible for a small senior level school to function as an independent unit, despite a very low number of pupils. To realize a working situation of the school, that will make the pupils achieve as good study-results as if they had been teached at a so-called conventional senior level school.

Working with the time-schedule.

A forecast shows that the pupil recruitment area will probably produce three classes (e.g. one class per grade) during the entire seventies, but in the eighties there will be a risk of being able to set up only two classes (table 5:2).

The work unit decided in the first place, to try to find forms of activity suitable in a situation where the pupil population of the senior level unit will admit only two classes.

The task of the group therefore was to adapt the time-schedule of the central standard curriculum at a minimum of change, to be used where joint classes or groups are necessary because of few pupils.

The work unit suggested the following:

1. Joint classes and groups in grade 7 and 8, while grade 9 should form a class of its own.
2. Necessary adjustment of the time-schedule of the senior level (tab. 5:1). In brackets is mentioned, whether the subject in question is to be studied or not according to the time-schedule in the central standard curriculum.

Table 5:1 Alteration of time-schedule. Hallen.

SUBJECT	ppw [1] 1st year grade (7)	ppw 2nd year grade (8)	ppw in grade 9
Domestic science	2 (-)	3 (3)	- (2)
Music	1 (2)	- (-)	2 (1)
Optional subjects	3 (4)	3 (3)	5 (4)

1) Pupil periods/week

Table 5:2 PUPIL POPULATION (forecast)

School year	75/76	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91
Grade																
9	30	18	29	17	23	26	22	16	25	20	22	15	12	13	17	10
8	18	29	17	23	26	22	16	25	20	22	15	12	13	17	10	
7	29	17	23	26	22	16	25	20	22	15	12	13	17	10		
6	17	23	26	22	16	25	20	22	15	12	13	17	10			
5	23	26	22	16	25	20	22	15	12	13	17	10				
4	26	22	16	25	20	22	15	12	13	17	10					
3	22	16	25	20	22	15	12	13	17	10						
2	16	25	20	22	15	12	13	17	10							
1	25	20	22	15	12	13	17	10								
Sum Grade 1 born	68	69	70	71	72	73	74	75								
Total number of children per school year	206	196	200	186	181	171	162	150								

The intention with adjustments as above is to facilitate a fusion between grade 7 and 8. This means that the pupils will study the first and the second year's course together in joint classes and groups in the following subjects: domestic science, music, social and natural science subjects. Grade 9, however, will continue as usual in accordance with the central standard curriculum used by the senior level.

Table 5:3 Time-schedules according to the non-graded system in Hallen

SUBJECTS	1st year (grade 7)	2nd year (grade 8)	grade 9
Swedish	3	3	4
Mathematics	4	4	4
English	3	3	3
Music	1	-	2
Art	2	2	1
Handicraft	2	2	1
Domestic science	2	3	-
Physical training	3	3	3
Social orientation subjects	6	6	5
Natural orientation subjects	4	4	5
Optional subjects	3	3	5
Freely selected work	2	2	2
	35 ppw	35 ppw	35 ppw

In grade 7 and 8 the time-schedule has been changed in music, domestic science and in the optional subjects (table 5:3). The changes will give grade 7 and 8 an equal number of hours per week in the subjects mentioned (except for 3 ppw in domestic science one year and 2 ppw the other year + 1 ppw in music). In this way joint classes and groups will be possible to set up as regards ppw in these subjects.

This schedule was introduced in grade 7 at the beginning of the 1973/74 school year.

Introducing this system also meant that the curriculum planning had to cover all the three school years. This was done and has been elaborated more exact as the experiment went on. The plans from school year 1975/76 and three years on are shown in table 5:4.

A more detailed picture of the timetable of 1975/76 is presented in table 5:5. In table 5:6 the plans for 1976/77 are illuminated due to how many teacher-positions are needed.

Table 5:4 Planning for a longer period

Time-schedules in social and natural science subjects (SO-NO) introduced at the beginning of the school year 75/76

SUBJECT	1st year's course		2nd year's course		3rd year's course		TOTAL	
	Grade 7 - 8	school year 75/76	Grade 7 - 8	school year 76/77	Grade 9	school year 78/79		
	ppw	ppyear	ppw	ppyear	ppw	ppyear	ppw	ppyear
SO:								
Re	2	74	2	74	1	37	5	185
Sk	1	37	1	37	2	74	4	148
Hi	1	37	2	74	1	37	4	148
Ge	2	74	1	37	1	37	4	148
SO: Total	6	222	6	222	5	185	17	629
NO:								
Bi	1	37	2	74	2	74	5	185
Ke			2	74	1	37	3	111
Fy	3	111			2	74	5	185
NO: Total	4	148	4	148	5	185	13	481
SO + NO	10	370	10	370	10	370	30	1.110

Table 5:5 Draft of timetable for the school-year 1975/76

	1	2	3	4	5
SUBJECT	Range	Need			
	Grade 7-9 ppw acc. Lgr 69	Grade 7-8 1st year PANG-project	Grade 9 3rd year PANG-project	Total ppw	R-N + -
Swedish	13	6	4	10	+ 3
Typing	2	1	1	2	0
Mathematics	24	12	8	20	+ 4
English	18	9	6	15	+ 3
Music	3	2	2	4	- 1
Art	5	4	1	5	0
Handicraft	12	10	2	12	0
Domestic science	9,5	6	-	6	+ 3,5
Physical training	12	6	3	9	+ 3
SO - subjects	17	12	6	18	- 1
NO - subjects	13	8	5	13	0
Rescources	9	4	2	6	+ 2
Optional subjects	33	18	13	31	+ 2
Freely selected work	12	8	4	12	0
TOTAL	182,5	106	57	163	19.5

Notes Column 1: Ppw for the teachers acc. to Lgr 69 (= central standard curriculum).

" 2-4: Planned need of o ppw acc. to the intentions of PANG

" 5: Ppw lost or won in the different subjects. The surplus is used for lessons conducted by teachers as follows:

Swedish-Mod. languages	4 ppw
Swedish-SO	4 ppw
Maths-NO	4 ppw

Table 5:6 Suggested work units and ppw as a basis for positions 76/77

GROUP 1.	Languages:	German-French	19 ppw	
		Eng	15 ppw	
		Sw	4 ppw	
		Resources	2 ppw	
		Clinic	4 ppw	2 positions
		Total	44 ppw	(1 part-time post)
GROUP 2.	Sw-SO subjects:	SO	17 ppw	
		Sw	6 ppw	
		Art	5 ppw,	
	Reduction for vocational counsellor and administrative assistant to headmaster		11 ppw	
		Resources	2 ppw	
	Attendence in the middle level		9,5 ppw	
		Total	50,5 ppw	2 positions
GROUP 3.	Ma-NO subjects:	Ma	20 ppw	
		NO	17 ppw	
		Ec	2 ppw	
		Mu	2 ppw	
		Clinic	7 ppw	
	Attendence in the middle level		7 ppw	
		Resources	4 ppw	3 positions
		Total	59 ppw	(one position as head teacher)
GROUP 4.	Other subjects:			
	a) Technology		11 ppw	1 position in common with the senior level school of Mörsil
	Freely selected subject		2 ppw	
		Total	13 ppw	
	b) Textile work:	the senior level	5 ppw	
		middle level	8,5 ppw	
	Freely selected subject		2 ppw	
		Total	15.5 ppw	1 part-time position

CONTINUE

CONTINUE

c)	Wood- and metal-work:		
	the senior level	7 ppw	
	middle level	8,5 ppw	
	Total	15.5 ppw	1 part-time position
d)	Physical training:		
	the senior level	9 ppw	
	junior and middle level	10 ppw	
	reduction	1 ppw	
	Total	20 ppw	1 part-time position
e)	Domestic science:		
	the senior level	9 ppw	
	Freely selected subject	2 ppw	1 position as an extra teacher empolyed on a part-time basis = 1 timlärartjänst
	Total	11 ppw	

Summing-up

The experimental activity at Hallen means to try to find forms of working suitable for a small senior level school with a pupil population between 35 and 60. Three grades (7-9) form two classes.

This results in the following solution:

1. Joint classes and groups in grade 7 and 8 in all subjects except

   Mathematics
   English
   German
   French

2. In general subjects a change between the grades means: studying the first year's course
   second year's course

3. General and advanced course form joint groups in mathematics and foreign languages.

4. Girls and boys have physical training together.

5. To give the pupils increased possibilities to choose among the optional subjects by means of joint groups according to point 1-4. (Different dividing and assignment of resources).

Difficulties and problems which mainly have been dealt with and partially solved can be identified in the following six points:

1. Increased demands upon the pupils as to their ability to work more independently.

2. To find suitable educational material.

3. In some cases uncertain working conditions for teachers owing to a shrinking basis for position.
   The number of ppw in a subject may fluctuate from year to year.

4. The teachers must teach many subjects (more than two), combine the position with teaching at another school or another level.

5. Problems with timetables:

   a) school transports must be coordinated with several schools

   b) teachers teaching at several schools or on several levels.

6. Small schools don't get any administrative assistants. (No government subsidies are given!)
   This leads, to a great extent, to a one-man administration.

During the experiment-years there has been a successively increasing experience and development, which have brought teachers and pupils together in an ever developing situation, inspiring for the teacher-work and the real teacher-role as well.

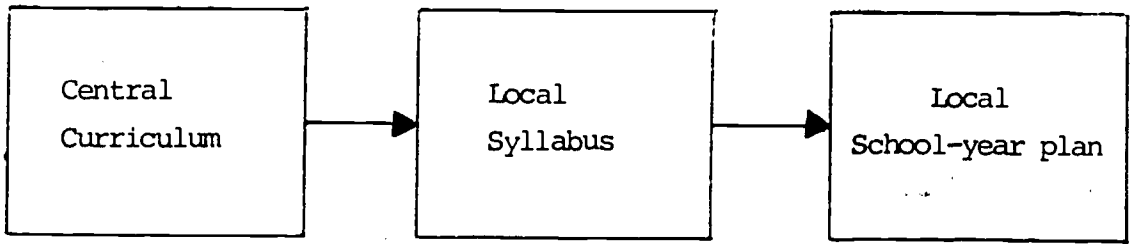
6. Non-graded teaching in general subjects in Hallen

By Erik-Artur Egervärn

Planning

When planning for a non-graded teaching-learning situation in general subjects, social and natural sciences, three main steps were to be co-ordinated (figure 6:1).

Figure 6:1 Main steps in the planning model



The central curriculum gives general recommendations for the teacher. There are also examples of more detailed syllabus and lists of different study fields. These general recommendations were put together and resulted in a local syllabus which meant a selection of study fields. Teachers as well as pupils had the possibility to take part in this work. From this base a local school-year plan was arranged. Study fields were coordinated, timetable decided about and arranged for the whole school-year.

Grouping of pupils

Grade 7 (29 pupils) and grade 8 (18 pupils) have formed two mixed work units with 23 respectively 24 pupils. Pupils in grade 9 have been educated in a traditionally graded structure. Pupils mixed from grade 7 and 8 have been free to choose their own fellow-workers. Pairs and groups formed in this way have also been examined as to:

1. What would the pupils like to work with and what do they need?
2. What was their capacity?
3. What was the geographical distance between school and their homes and where did they live?
4. What was the proportion between male and female pupils?

The free formation of the two groups brought about a positive reaction from the pupils. In fact, it also turned out to form two nearly equal and equally large groups.

Pupils in these two mixed groups are teached according to a so called B-model. This means that a two-year plan is worked out from the beginning (Plan I and Plan II). During the first year all the mixed pupils are taught according to Plan I and during the second year according to Plan II - even if those pupils in grade 7 are newcomers into the system (figure 6:2).

Figure 6:2 Curriculum plan and mixed grouping

1st year	2nd year	3rd year	and so on →
PLAN I Grade 7-8 mixed	PLAN II Grade 7-8 mixed	PLAN I Grade 7-8 mixed	
Grade 9 separate Plan 9	Grade 9 separate Plan 9	Grade 9 separate Plan 9	

Thus, when leaving school, every pupil has studied PLAN I + PLAN II + Plan 9, but they have not studied them in the same order. Some have taken the way PLAN II + PLAN I + Plan 9.

The contents of the plans are shown in figures 6:3 - 6:5. Summing up the contents is as follows:

PLAN I: An orientation in and about the world. The different social science subjects are coordinated.

PLAN II: The Scandinavian countries and the local community are studied. The different social subjects are coordinated. In coordination with the Educational and Vocational Guidance Programs three visits for purpose of study are made.

Plan 9: A global overview is given and problems related to this are discussed for example the energy crisis, overcrowdedness-problems in the Third World a.s.o.

Figure 6:3 PLAN I. Social sciences. Grade 7-8. Session: 1975/76

Week nr	Re	Sk	Hi	Ge	Notice
34 35 36 37 38	The BIBLE	G L O B A L G E O L O G Y + Nature and Climate			
39 40 41 42 43	Churches	E U R O P E Gov.	(1789 →) Hist.	Geogr.	
44					Holidays
45 46 47 48 49 50 51	Churches	U S A Constit.	Hist.	Geogr.	
	C H R I S T M A S V A C A T I O N				
2 3 4 5 6 7 8 9	Religion and Communism	S O V J E T Constit.	Hist.	Geogr.	
10					
11 12 13 14 15 16 17	Religion and terrorism	L A W AND	J U S T I C E		
18					
19 20 21 22 23 24 25	Jewish religion	W O R L D -	W A R I and	II	

Figure 6:4 PLAN II. Social sciences. Grade 7-8. Session 1976/77

Week nr	Re	Sk	Hi	Ge	Notice
34 35 36 37 38 39 40 41 42 43	The new test.	SCANDINAVIAN GEOLOGY The Hist. of DEMOCRACY			(Exc)
44					
45 46 47 48 49 50 51	The Revival mov. ⟷	Swedish constitution National movements Trade union - Temperance mov			
	CHRISTMAS VACATION				
2 3 4 5 6 7 8	Church	LOCAL STUDIES Local gov.	Hist.	Geogr.	(Exc)
9					
10 11 12 13 14 15	To live together	THE NATIONAL DEFENCE (Civil - Mil. - Econ. - psych.)			(Exc)
16					
17 18 19 20 21 22 23 24 25	Churches in SCANDINAVIA	COMMERCIAL and INDUSTRIAL LIFE IN SCANDINAVIA			(Exc)

Figure 6:5 Plan 9. Social sciences. Grade 9. Session 1976/77

Week nr.	Re	Sk	Hi	Ge	Notice
34 35 36 37 38 39	→	prep. "P R Y O" ↓	E C O L O G Y and NATURE PRESERVS		(Exc)
40 41 42 43	Prim peoples -"-	Relig. -"-	Growth of Culture -"-	-"-	"PRYO" Pract. voc. orientation
44					
45 46 47 48 49 50 51	The C L A S S I C A L P E R I O D E Jesus St. Paul	Greek	and	Roman hist. and relig.	
	C H R I S T M A S V A C A T I O N				
2 3 4 5 6 7 8	ISLAM	STUDY GUIDANCE	The "Völkerwanderung-periode" The Arabs		
9					
10 11 12 13 14 15	Buddhism and Hind.	E A S T	A S I A Hist.	Geogr.	
16					
17 18 19 20 21 22 23 24 25	A F R I C A and L A T I N A M E R I C A				

Social sciences and coordination with other subjects

All the social sciences are totally coordinated when working in problem areas. Some of them are also coordinated with natural sciences.

During 1 ppw (period per week) there has been a coordination with Swedish and social subjects.

With Gymnastics, Music and Handicraft the coordination has been more occasional.

The intentions for coordination are given in figure 6:6.

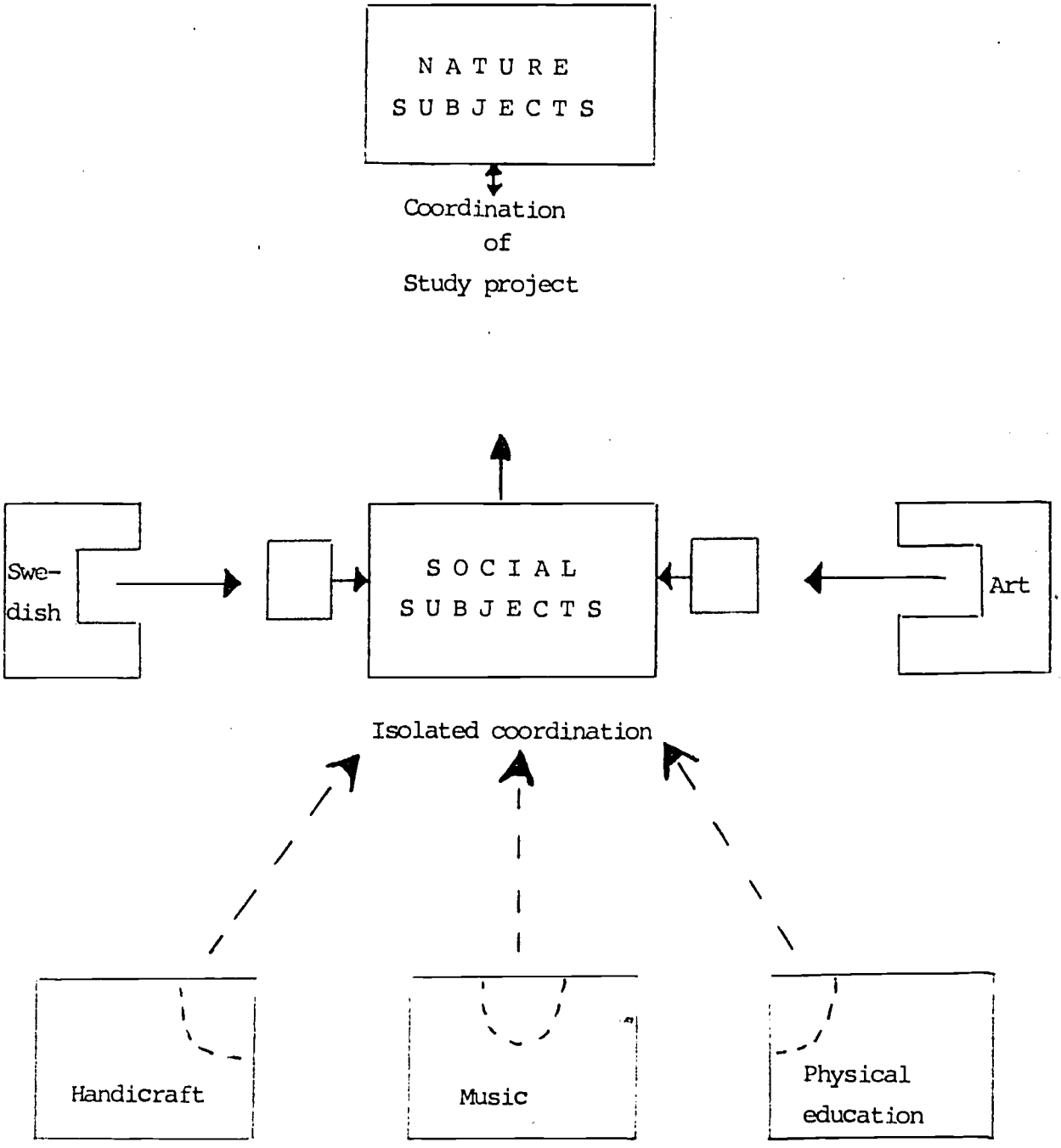
In coordination social sciences and Swedish forms have been given in reading, work knowledge and ability to talk and to write. These functions have been trained in connection to actual subject areas in social sciences.

Educational aids

Talking about educational aids in these subjects within a non-graded system of this kind some criteria have shown to be very important, that is to say materials should be:

1. Individualizing
2. Structured with summaries now and then
3. Self-instructional
4. Built up so that you must not follow the order of the material dictated by the author of the textbook
5. Sold to all acceptable cost

Figure 6:6 Coordination between subjects



Experiences

The experiences up to this date have been of positive as well as of negative kind. The most evident are summarized below.

Positive

- More cooperation between teachers
- More cooperation between teachers and pupils
- More cooperation between pupils
- More cooperation between school and home
- Increase coordination between subjects
- Easier transition from grade 6 to grade 7

Negative

- A more time-consuming work with the planning (more in the beginning of the school-year and less during the year)
- Some problems when a pupil moves. There need to be good information to the new school
- Some problems for the class-teacher to reach "only grade 7 or "only grade 8"

Summary

This experiment with social science subjects within a non-graded system should not be looked upon as an emergency measure to save small rural schools but as a forthcoming experiment, the experiences of which can be brought back to education in general. It seems to those working in small schools, that it could be easier to realize the main curriculum objectives in a small school.

7. Non-graded teaching in English in Solberg

By Anna-Lena Edlund

There are about 100 pupils in compulsory school in Solberg, 48 on the senior level. The number of pupils will steadily decrease. Therefore we had to think of an alternative teaching structure to be allowed to keep our school and especially the senior level.

At the same time as changing the structure we wanted to give the low performers and those with no motivation for studies, as well as all the others, the possibility to utilize their resources and to stimulate them to activity - some very important objectives of the Swedish school curriculum.

Table 7:1 gives a very short description of the Swedish school system.

Table 7:1 9-year compulsory comprehensive school in Sweden

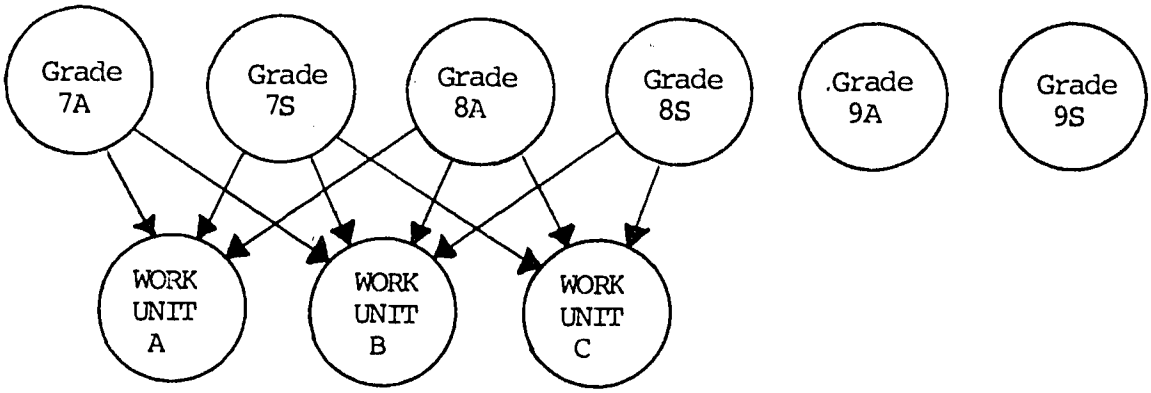
Level	Grade	Age
Junior level	1 - 3	7 - 9
Middle level	4 - 6	10 - 12
Senior level	7 - 9	13 - 15,16

Before entering the senior level of compulsory school every Swedish pupil has to choose between a general course (= A) or an advanced course (= S) in 'the foreign languages' and 'mathematics'. This is a free choice, and not specially according to their ability, which you can see, if you look at results on achievement tests for example. A pupil can choose a general course even if he has the best test results in the class, and the opposite.

At the school of Solberg we concentrated on elaborating a non-graded teaching-learning situation in the foreign language English, which is a compulsory subject.

Instead of having 4 groups in the 7th and 8th forms (7A + 7S, 8A + 8S) the pupils were grouped into 3 work units (A, B, C). Pupils in the 9th form study in the normal way, that is to say "graded". This is visualized in figure 7:1.

Figure 7:1 A model for work units (= non-grading) in English in grade 7 and 8



How to distribute the pupils among the work units? This is how the problem was solved in Solberg: We mixed pupils from the 7th and the 8th forms. We looked at their results of the Standardized achievement test in English in grade 6 and talked to the teachers who had taught them in grade 6, to get more information, because the test does not measure the oval part of the language. Then we grouped the pupils into the work units. Thus pupils from the 7th and 8th forms were mixed within the same work unit (figure 7:1).

Figure 7:2 Number of pupils from grade 7 and 8 within different work units during 3 periods of session 1975/76

SESSION 75/76	Grade 7			Grade 8		
	UNITS			UNITS		
	A	B	C	A	B	C
Period 1	6	8	-	5	4	11
Period 2	4	10	-	5	4	11
Period 3	5	9	-	4	4	11

Then the pupils were given information about the work units and had the possibility to influence their placing into the work units.

The work units are not fixed for the rest of the session. The pupils work together in these groups from the start of the autumn term (in August) till the middle of October. Then, if they are not satisfied in the units or if they have succeeded or failed, they can move from one unit to another. An assistant teacher helps them to make this change easy.

After that the composition of the units can be changed at the end of the autumn term and at the middle of the spring term, if it is necessary. In figure 7:2 you can see the changes that were made last year.

Educational material

The pupils have different educational material in the different work units. Rather easy text and workbooks in Work Unit A, normal material for the grade in Work Unit B and advanced material in Work Unit C. We have one material for the 1st year of non-grading and another for the 2nd year. In "year three" we use the same material as in "year one" and so on, because then the pupils can move freely between the units during the two years. It has not been easy to find suitable material for each unit.

Timetable

To be able to work according to this system during the English lessons, the same "work units" have to work together during the lessons in social and nature science as well. This can most easily be seen in figure 7:3 - the timetable of Solberg 1975/76.

And as the same pupils need not be good (or bad) in both English and for example general science, any tendency of level grouping must not be shown in the other subjects concerned.

Figure 7:3 The timetable of Solberg, 1975/76

		7	8	9
MONDAY	8.30- 9.20	Mu Ga	Ty F Tk Hc	Eng a E Engs Hö
	9.20-10.00	NO L Eng	E SO K	Te He
	10.10-10.50	Eng E SO	K NO L	Sv F
	10.50-11.30	SO K NO	L Eng E	Gy Hö
	12.20-13.00	Sv F Ms E	Te He	SO Hö
	13.00-13.40	Ms E Sv F	Te He	SO Hö
	14.00-14.40	Fva	Fva	Fva
	14.40-15.20	Fva	Fva	Fva
TUESDAY	8.30- 9.20	Ty F Ek E Tk He	SO K	NO L
	9.20-10.00	Ty F Ek E Tk He	SO K	NO L
	10.10-10.50	SO K	Ty F Tk He	Maa N Mas L
	10.50-11.30	SO K	Ty F Tk He	Maa N Mas L
	12.20-13.00	Maa N Mas Hö	NO L	Ty F Ek E Tk He
	13.00-13.40	Maa N Mas Hö	NO L	Ty F Ek E Tk He
	14.00-14.40	NO L	Maa K Mas N	Hk Ge
	14.40-15.20	NO L	Maa K Mas N	Hk Ge
WEDNESDAY	8.30- 9.20	NO L Eng	E SO K	Ty F Tk He
	9.20-10.00	NO L Eng	E SO K	Ty F Tk He
	10.10-10.50	Eng E SO	K NO L	Sv F
	10.50-11.30	Eng E SO	K NO L	Sv F
	12.20-13.00	SO K NO	L Eng E	Ek E
	13.00-13.40	SO K NO	L Eng E	Mu Ga
	14.00-14.40	Te He	Sv F	Sv F
	14.40-15.20	Te He	Sv F	Ek vv E NO vv L
				Ek vv E NO vv L
THURSDAY	8.30- 9.20	Sv F	Slt A Sltm He	Enga E Engs Hö
	9.20-10.00	Sv F	Slt A Sltm He	Enga E Engs Hö
	10.00-10.50	Ty F Ek E Tk He	Maa K Mas N	Gy Hö
	10.50-11.30	Ty F Ek E Tk He	Maa K Mas N	Gy Hö
	12.20-13.00	Slt A Sltm He	Sv F	SO Hö
	13.00-13.40	Slt A Sltm He	Sv F	SO Hö
	14.00-14.40	Gy vv W	Gy vv W	Sv F
	14.40-15.20	Gy vv W	Gy vv W	Slt A Sltm He
FRIDAY	8.30- 9.20	Maa N Mas Hö	Gy W Hk Ge	NO L
	9.20-10.00	Maa N Mas Hö	Gy W Hk Ge	NO L
	10.10-10.50	Gy W	Hk Ge	Maa N Mas L
	10.50-11.30	Gy W		Maa N Mas L
	12.20-13.00	Mu Ga	Hk Ge	
	13.00-13.40		Hk Ge Gy W	SO Hö
			Hk Ge Gy W	SO Hö

Teachers

A	=	Andreasson Ulla
E	=	Edlund Anna Lena
F	=	Frånberg Gun-Mari
Ga	=	Gafvelin Isedor
Ge	=	Gereberg Göta
He	=	Hennström Gene
Hö	=	Hörnström Sune
K	=	Kjell Britta
L	=	Lind Christina
N	=	Nilsson Sixten
W	=	Wiström Roland

Subjects

Eng	=	English (Work Unit A, B or C)
Enga	=	English general course
Engs	=	English advanced course
SO	=	Social orientation subjects
NO	=	Nature science

Experiences

The low performers and those of low motivation of learning English have got an opportunity to utilize their resources and have been stimulated to activity, because the education and the educational material have been adapted to their level of knowledge.

The environment is experienced as friendly and studyoriented in an accomodated way, which results in cooperative pupils and above all in progress.

The same thing applies to the high performers. They react to a meaningfull educational existence, because they are not slown down, but are allowed to work in their own speed.

Since each unit has a suitable educational material a rather far-reaching individualization can take place.

Problems identified and worked with

In elaborating a new teaching-learning situation different problems are brought to the surface of the work and have to be dealt with and solved. Some of the problems met until now in working with the above described system are discussed below.

The difficulty of finding a suitable educational material for each work unit has already been mentioned.

The grading has been another problem. Pupils who have chosen the same course (A or S), in certain cases, got into different work units. As the same teacher has taught in all the three work units she has been able to make a comparison.

The test results have also been compared with those of the pupils in a neighbouring school. There has also been a standardized achievement test at the end of the 8th form, of good use to the teacher in estimating her group of pupils. These procedures have been helpful for the teacher in judging the performance of the pupils.

Further notice and development

As to the teachers' own comments there are great possibilities to develop this system. As to organizational questions the 9th form can be brought into the work-unit-system as well.

Dealing with the teaching-learning methods within this system pupils can choose texts and exercises which appeal to them, and those who are interested in the same things can work together for some weeks if they want or if it is convenient to the area or problem of study.

INTERSKOLA '76

Ninth International Conference on
Education in sparsely populated areas
SVEG - SWEDEN July 13th - 21st 1976

Main purpose: Better understanding over the national boarders of school policy problems in sparsely populated areas.

Theme: School as an activating factor in cultural life in sparsely populated areas.

Items:
- Society planning in sparsely populated areas
- Cultural and educational conditions in sparsely populated areas in Sweden.
- Sparsely populated areas and
  - Recent reforms of the Swedish school system and their effects on primary and secondary education
  - Adult education and university extension courses
  - Education as an instrument in cultural policy

Outline Programme:

Morning session 09.00-12.00
Afternoon session 14.00-17.00
Evening activities

July 13th — Arrival and registration at Bäckedal folk high school, Sveg, 13.00 hours onwards

July 14th 09.00-09.15 — Official opening:
Hans Gustafsson, The governor of the county of Jämtland

Introduction to the municipality of Härjedalen and the county of Jämtland:
John Wallner, Chairman of the school board of Härjedalen
Lars O. Hansson, Chief Education Officer of Härjedalen

Words of welcome to Bäckedal Folk High School:
Åke Engström, Headmaster

Presentation of conference programme and methods of conference work:
Harry Östlund, School Inspector

	11.00	The educational system in Sweden and its importance as a cultural factor in sparsely populated areas: Lecture by Lars Sköld, Deputy Director of the National Board of Education
	14.00-17.00	Afternoon session: Group activities
	19.00	Reception
July 15th	09.00	Society planning for sparsely populated areas Ethnic minorities and their educational problems: Jan Björklund, Planning Director Gösta Andersson, School Inspector Lars Källström, In-service Training Officer Group discussions
	14.00	Excursion to Vemdalen Group discussions continue
July 16th	09.00	Nongraded upper stage of primary schools in Sweden: Per-Erik Eriksson, School Inspector Annika Andrae, Ph.D. Anna-Lena Edlund, M.A. Erik-Artur Egervärn, M.A. Jon Göransson, Headmaster Sandy Konradsson, Headmaster Upper stage schools as cultural institutions Group discussions
	14.00	Excursion to Lillhärdal Visit to small former upper stage school Discussions continue
July 17th	09.00	Secondary education in sparsely populated areas in Sweden: Staffan Lundqvist, Headmaster Lennart Robell, Headmaster Importance of secondary education as a cultural and professional factor Discussion
	14.00	Afternoon free
July 18th	09.30	Excursion to the mountains of Härjedalen
July 19th	09.00	Adult education - university extension programmes: Åke Engström, Headmaster Elisabeth Grimlund, Head of university extension section, University of Umeå Ebbe Lindblom, Lieut.-col. (ret.)
	14.00	Main features of a comprehensive educational programme in sparsely populated areas

July 20th	09.00	Education as an instrument for cultural policy in sparsely populated areas - programme and achievement Plenary sessions to receive group reports
	11.00	Interskola Annual Meeting
	14.00	The development of reading and writing ability in Sweden - report from research project: Egil Johansson, Ph.D.
	16.30	Terminal session of Conference
July 21st		Departure

Language: English will be the working language of the Conference.

Conference procedures:

1. The programme will include plenary sessions and small study groups.
2. Conference themes will be illustrated by field studies of the problems as found in the Conference region.
3. Social and cultural activities as well as excursions will form an integrated part of the Conference programme.

Conference Hall and Accomodation: Bäckedal Folk High School will accomodate all participants. Conference Hall and facilities for group sessions and other activities are located within the school.

Meals:

Breakfast:	All days except Sunday 18th		8.00 - 9.00
	Sunday 18th		7.30 - 8.00
Lunch:	All days		12.00 -13.00
Dinner:	Tuesday	13th	17.00 -17.45
	Wednesday	14th	17.30 -18.15
	Thursday	15th	" "
	Friday	16th	18.30 -19.15
	Saturday	17th	16.30 -17.30
	Sunday	18th	Excursion programme
	Monday	19th	17.30 -18.15
	Tuesday	20th	18.00

Evening programmes:

Tuesday	13th	19.00	"Let us introduce Härjedalen!"
Thursday	15th	19.15	Reception of Remsgården
Friday	16th	19.30	"International show" - "Special committee prepares programme
Saturday	17th		Excursion to "Gammelgården", Sveg
Monday	19th	18.30	Introduction to Bäckedal school activities

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