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DEMOCRATIC REPUBLIC OF VIETNAM

Introduction

by NGUYEN VAN HUYEN
Minister of Education

When one visits the Vietnamese countryside, one cannot fail to be struck by the blossoming of new schools whose red-tiled roofs make gay splashes amidst the green of the villages. As for Hanoi, the capital city, it is now surrounded with a whole series of establishments of higher learning: the Polytechnic College, the Teachers' Training College, the Agricultural College, the College of Sylviculture, the Institute of Hydraulics, the Higher School of Economics and Planning, etc. Even those who would deny all merit to the D.R.V. have to recognize that what characterizes our education is first of all its vitality. Twenty years have elapsed since the proclamation of independence; but the repeated assaults of two powerful imperialisms — the French, then the American — have not been able to prevent the Vietnamese people from carrying out large-scale educational work.

The dynamism of our education essentially originates from the fact that, sprung from the revolution, it sets itself the primary task of serving it. Step by step, education work strives closely to follow every stage of the revolutionary movement. This absolute faithfulness to revolutionary objectives has allowed it to surmount all difficulties and has given it an ever-renewed content.

The goal and content assigned to education may be either an abstract humanism, which often is but a signboard hiding the worst kind of policy, or the task of forming men who stand ready to serve their country and to defend the revolutionary cause. We have taken the latter path. Our people, under the leadership of the Workers' Party, have charted a course for education in conformity with the exigencies of their liberation and their historical development.

If the general line has remained unchanged, forms and ways of applying it have been in constant evolution, so as to meet the needs born of each revolutionary stage. On the one hand our education springs from the concrete requirements of a colonized nation heroically struggling for its liberation, of a country engaged in arduous economic and cultural construction work aimed at taking it direct from the feudal and colonial regime to socialism without passing through the stage of capitalist development, on the other hand, the course it follows and the forms it adopts are the result of a constant deepening of Marxist-Leninist doctrine in education.

While we have a clear and precise doctrine, we do not pretend to have found magical formulas likely to solve all difficulties. We have sought, explored, groped our way, and we shall be seeking, exploring, groping in future.

Vietnamese Studies *must be commended for having brought together in one single volume articles discussing various aspects (not all of course) of our education. We hope these articles will interest our foreign friends. As for us, we should always be happy to get acquainted with educational experiences of other countries so that our own might be enriched.*

In this volume are treated problems of school education ; we shall discuss in a subsequent issue those of education out of school. (Editor).

EDUCATION AND REVOLUTION IN VIETNAM

NATIONAL AND POPULAR UPSURGE

August 1945. Japan had just surrendered. In the secrecy of chancelleries, the imperialist powers were engaged in a new partition of the countries of Indochina. In the South, British troops were about to be landed ; in the North, Chiang Kai-shek's armies stood ready to enter the country and prepare the way for its seizure by the Americans. The French government was hastily setting up an expeditionary corps in the hope of reconquering its old possessions. All thought that there would be a vacuum and that a new era of colonial domination was in store for the country. What could its people do, deprived as they were of all modern means of defence, and exhausted after 80 years of colonial rule and five years of Japanese occupation ? Hadn't an unprecedented famine just killed two million people in the early part of 1945 ?

A colossal surprise was in store for all those aggressors. During the latter part of August, millions of people with the support of armed groups launched assaults everywhere on central and local administrations. From North to South, in all the towns and communes, a new power was being set up, supported by an irresistible tide. The Vietnamese people were hungry ; they

lacked everything except courage. The D.R.V. government, installed on 2nd September, had 1,250,720 piastres all told in its coffers, barely enough to pay its functionaries for a few days.

This did not prevent President Ho Chi Minh from assigning to the whole nation, as early as 3rd September, three primary tasks of equal importance : to struggle against foreign aggression, famine, and ignorance. In the most critical hours, neither the Vietnamese people nor their government have forgotten that education is one of the best weapons of the revolution.

The colonial regime had left 95% of the population illiterate ; the little education it had dispensed to a few privileged people had been aimed at inculcating in them scorn for national culture and blind adoration of everything coming from the "mother country". These two stigmas of colonisation had to be erased as quickly as possible : illiteracy and the anti-national character of education.

In the very first week of its existence, the D.R.V. government promulgated a decree setting up a "Department of Popular Education" whose main task was to fight illiteracy.

The same upsurge that had led to the conquest of power, and urged the people to increase production to vanquish famine and to prepare themselves for the fight against the imperialists' armed aggression, was to help in overcoming all difficulties in the fight against illiteracy. It was a mobilization in depth of broad masses of the people, a popular movement of considerable scope. The mass line was applied in full. The best teaching methods, of course, had to be taught the volunteer teachers, but above all they should be made conscious of the revolutionary character of their work. The fight against illiteracy was first of all a political work. A special article being devoted to this subject in the present volume, we shall say no more of it here, except that the result was that at the end of one year two million people had learnt to read and write — a precious human capital for the coming revolutionary struggles.

The next problem was to give education a national content.

In a first step, programmes and textbooks were purged of all that was reactionary and retrograde, the legacy of the old

regime. Then in the years that followed, the content of education had to be adjusted to national realities, which were in constant evolution. One thing that could be done immediately was the use of the national language at all levels of education. Under the colonial regime, Vietnamese had been studied as a foreign tongue in secondary schools, French being the principal medium of instruction. In higher education establishments, all lectures had been in French. Right from the start, we adopted a categorical stand : every nation, every people having their own economic and cultural life, their own psychology, the national language alone can express in a complete and faithful way their feelings and aspirations, their thoughts and reflections, and make for national unity. Only in these conditions could the dissemination and deepening of scientific and technical knowledge take place among the broad masses. The use of a foreign language inevitably results in reserving the privilege of culture for a minority. Culture, being a specifically national product, can only be expressed through the national language.

The Vietnamese language, spoken by the entire people from North to South, has a long history which had been relegated to the background by the colonialists ; liberation set it on a new course of development. The existence of a unified national language was a considerable advantage. But following nearly a century of colonial rule, it was only natural that we should have lacked textbooks, dictionaries, teaching materials. In particular, there was a shortage of appropriate terms in the national language to express modern scientific notions. However, we did not wait till we had every necessary means in hand before starting. Right from the first days, teachers and pupils taught and learnt in Vietnamese, and the creation of new terms in all fields was carried out simultaneously with education work. It is still going on at present (1). Experience has proved that this work is not above the strength of a people determined to liberate themselves in all fields, including that of language. The creation of new terms is at the same time the work of the masses of the people,

(1) See article on the creation of a scientific terminology, in this volume.

and that of specialists ; collective work is indispensable. To the intellectuals trained under the old regime, it was a real revelation to discover that the national language, which they had imagined poor and without great resources, was full of possibilities. Within a very short period of time, driven forward by the patriotic *élan* of the August Revolution, education work in the national language had made such progress that nobody would think that it could have been otherwise. How closely related teaching in the national language is to the revolutionary movement is proved by the fact that in South Vietnam at present scientific and technical education is still carried out in French and (American) English. The struggle waged these last few years for the use of the national language in higher education has been one form of national revendication made by Southern students and intellectuals against American domination.

Hardly had we laid the foundation for a national and popular education when on 19th December, 1946, the colonialists launched a large-scale offensive against our country, aimed at reconquering it completely. (In fact, as early as 23rd September, 1945, they had begun attacking Saigon and the South). The bigger cities and the more important communication lines were occupied by the enemy ; the countryside was subjected to air-strikes and barbarous mopping-up raids. The war raged all over the country, which was cut off into several zones virtually isolated from one another. The war was to last 8 years, from 1946 to 1954.

Those hard conditions did not interrupt the great movement of education launched since the August Revolution. The watchword was to wage a "total, nation-wide, all-sided and protracted resistance." Education was considered a battlefront. Various watchwords expressed this resolution to go forward in education work, which was to be developed at all costs in spite of bombs and shells : "to study is to wage resistance against aggression," "the fight against illiteracy must be carried out simultaneously with that against aggression," "every class should be a propaganda centre for the resistance," etc.

In the liberated areas, in view of enemy bombing raids, classes were held at night or, if in the day-time, under the shadow of

trees and near trench-shelters. The teachers followed the population who evacuated threatened villages to live in the mountains, or they went with the columns of volunteers carrying supplies to the army or building strategic roads. The soldiers studied in the intervals between engagements or even when they were on the march, each carrying on his back some kind of board bearing the text to be studied by the comrade immediately behind him. In guerilla zones, people studied in small groups of 3 to 5 ; even in colonialist prisons anti-illiteracy courses were organized by patriots. As illiteracy receded, the need arose to give instruction to those who had learned to read ; complementary education was organized in the very first years of the Resistance (see following article).

Schools and colleges evacuated from the towns were re-organized in the liberated areas in extremely difficult material conditions. But they did not cease functioning ; better still, they developed. Often classes were conducted in the "guerilla style" : teachers and students sat on the ground in small groups. Whenever an enemy column was sighted, books, microscopes and other instruments were packed and hidden away, and everyone snatched a spear or a gun to participate in the fight. Classes were resumed after the enemy had left. Often teachers and students tilled the land to meet their needs.

By 1950, the Resistance entered a new stage. Our forces had developed. The French colonialists, with increased U.S. military and financial aid, were making desperate efforts to try and crush us. National liberation demanded from all the people an all-out mobilisation of material and moral resources. Education had to show itself to be equal to these new revolutionary tasks.

Our teachers, following many years' participation in combat and production, also felt the need to re-organize education on new bases. The Party launched the watchword for a "national, scientific and popular education" with the task of training "good citizens, good fighters, good cadres, good workers" ready to serve the Resistance, to serve production, to serve the people. The general orientation was to closely link theory with practice, and study with productive work.

A unified system of general education was organized, including a first-level stage of 4 years, a second level of 3 years and

a third level of 2 years. The children entered the first form when they were 6-7 years old, after going through infant classes. After nine years of general education, there was one year of pre-University training for those who were admitted to places of higher education. The curriculum included mostly fundamental scientific notions, which were studied in a systematic way but in relation to concrete exigencies of the situation.

The internal organization of schools was democratized. Besides the leading body, the Teachers' Council, and the Council of Discipline, were set up organizations of the Teachers' Trade-union, the Patriotic Youth, the Pupils' Union, the Pioneers, the Children of August. All these organizations made it possible for all to participate in the various school and para-school activities and inculcated in each the consciousness of being master of his school.

Teachers' training schools trained teachers for first-and second-level schools. In 1952, pedagogical classes were set up to form teachers for third-level schools. A College of Medicine and Pharmacy had been opened right from the start ; later, classes on higher mathematics and fundamental sciences were opened. Technicians for agriculture and road-building, and medical workers were trained in a few secondary professional schools. A Commission for the writing of textbooks was set up.

But what marked a real turning-point in this period was the clear consciousness of the necessity for an advanced political and ideological training, which gave education an all-round character : education was to give not only knowledge but also a political and moral formation to a new generation ready to shoulder its responsibilities. School education was no longer confined to classrooms but was closely linked with political life and production work. Outdated ideas about non-political education were gradually eliminated. A large number of students enlisted in the People's Army. Teachers and pupils participated in production work, complementary education drives, anti-illiteracy campaigns, the diffusion of various policies of the Government and the Party. Events of the national liberation war had a profound impact on school education. In 1953, when the peasant masses were mobilized for land reform, education received a new impetus. The national anti-imperialist struggle combined with the anti-feudal fight gave

teachers and pupils the opportunity to steel themselves in a fierce and complex class struggle. The years of Resistance regenerated the content and methods of education. Marxism-Leninism became the official doctrine which breathed dynamism into the whole of our education system while ensuring for it a scientific character. War had by no means paralysed our efforts in the field of education ; when peace returned, we were ready for new progress.

SOCIALISM AND EDUCATION

With the signing of the Geneva agreements in July 1954, the Vietnamese revolution entered a new stage. The national and democratic struggle was carried on in the South against American imperialism and its stooges. This arduous and heroic struggle has demanded from our compatriots high courage and great sacrifices. The resounding victories scored by our southern compatriots have had deep repercussions in the North and elicited sympathy and admiration from the peoples of the world. The North, after quickly healing the wounds of war, has engaged since 1958 in the building of socialism. By 1961, socialist economic structures had been virtually set up : the State sector occupied the pre-eminent place in industry and trade ; capitalist industry and trade had been transformed ; nearly 90% of the peasant households had joined co-operatives ; the co-operative movement was spreading to handicrafts and small trade. The first five-year plan (1961-65) adopted at the Third Congress of the Workers' Party set the country the fundamental task of building an independent national economy whose backbone was the development of heavy industry. In several resolutions, the Party's Central Committee successively defined tasks to be fulfilled in agriculture, industry and trade. Within a few years, new production relations, a new economy, were built. These radical changes required uninterrupted efforts in the field of education.

To educational workers, new, complex tasks were assigned :

— Complete liquidation of illiteracy, particularly in areas formerly held by the enemy ; strong development of complementary education for grown-ups.

— Strong development of professional and higher education with a view to supplying the country with the necessary number of technical, administrative and political cadres.

— Development of general education so as to inculcate in the new generations a new spirit and provide them with the necessary knowledge.

— Development of education in mountain areas inhabited by national minorities.

The struggle against illiteracy, and complementary education for grown-ups are treated in the following article. Let us say however that by the end of 1958 almost the whole of the population of the plains from 12 to 50 years of age had learnt to read and write. Thenceforth complementary education alone was carried on.

All those tasks brought forth particularly arduous and complex problems.

The training of cadres

The rapid development of a new economy and culture requires the training of a large number of cadres, and also the solution of problems concerning their repartition, their quality and the time of training. Various training methods are used simultaneously : regular courses in schools and colleges, evening classes, correspondence courses. In the first years, the programmes were shortened so as to turn out rapidly technicians and cadres, who were in short supply ; but soon they were gradually extended to reach international norms (see article on the Polytechnic College).

By closely linking theoretical study with production work, the students are able to acquire the necessary knowledge and know-how for the solution of practical problems, in particular technical problems which are different from those dealt with in textbooks inspired from materials published in highly industrialized countries. As the teachers' level rises, study becomes linked with scientific and technical research. Study, production, and research are the three links of the same chain. Factories call on schools and colleges for help ; teachers and students are sent there to acquaint themselves with practical work. It is necessary

that technicians trained in our schools be acquainted with the most modern, and at the same time, when the need arises, with the most rudimentary techniques. Even such an abstract science as mathematics directly participates in the work of various undertakings : "Operations Research" teams have been sent to factories where they help realize important savings. In a country which is building socialism starting from a backward feudal economy, the training of technical and scientific cadres requires original solutions which could not be mechanically imitated from those adopted in other countries.

One must have cadres with the necessary technical knowledge but above all with the will to solve national problems through their own efforts and not by relying on external aid. True, we have had recourse to foreign technicians and specialists, and the brother socialist countries have extended to us appreciable help, but above all we strive to develop among our students and cadres this will for self-reliance, so that they might resolutely tackle concrete problems of the national economy and find adequate solutions to them.

That will is indeed the will to serve the fatherland, the people, and to participate whole-heartedly in the building of a better society. The point is not to train pure technicians, but technicians who are at the same time revolutionary militants.

To inculcate revolutionary ideology and ethics is the primary task of schools and colleges. Revolutionary consciousness must be the foundation of science. Patriotism, the love of socialism, proletarian internationalism, hatred for the enemy of progress, the will to bring one's contribution to the re-unification of the country, the love of collective labour — such are the fundamental elements of these revolutionary ethics which we seek to inculcate upon our cadres. Thus, the tripod on which rests our education is : theoretical studies, participation in production, and political and ideological education, the last being the mainspring which gives the whole setup ever renewed vigour. As we said, by putting Marxism-Leninism at the basis of our education, we equip it with an especially effective weapon.

It goes without saying that co-ordination of those three aspects of education brings forth complex problems in practice. We have had to struggle against the tendency which consists in laying the stress on scientific and technical instruction at the expense of political and ideological education ; we have had also to set right the reverse tendency in which the task of imparting to the pupils adequate scientific and technical knowledge is neglected. For every degree of education there must be a judicious proportion in the time devoted to theoretical studies and production work respectively, so as not to form theoreticians lost in abstractions and at the same time not to fall into a vulgar pragmatism. Much groping has been necessary and readjustments are continually carried out according to the concrete conditions prevailing in each stage.

The problem has had to be solved of the number and quality of the *teachers,* for higher education in particular, and especially for the first years of study. The solution to this problem rests upon this idea : the teacher should at the same time impart theoretical knowledge and inculcate high revolutionary ethics. In spite of their insufficient number and professional qualifications, national cadres were exclusively employed right from the start. The services of foreign experts, coming from the brother socialist countries, are used not to teach students but to help the national teachers, particularly in professional and higher education. The teacher whose duty is to communicate knowledge and at the same time to direct his pupils to a revolutionary path that is proper to the country, can only be a national cadre. While improving our teachers' training schools, we have promoted to difficult posts cadres who might be insufficiently competent at the start but who are animated by the will of serving the country. These cadres learn their trade while practising it. Particular attention is reserved to the pedagogical schools which are considered the "heavy industry undertakings" of education.

Thousands of students, research workers and trainees are also studying in the brother socialist countries to improve their knowledge and become ever more competent teachers. Our schools and colleges carry out exchanges of experiences with educational establishments of those countries.

Problem of general education

After the return of peace, the first thing that had to be done was to unify in a single educational system schools of the liberated areas and those in regions hitherto occupied by the enemy. A new system of general education was set up, comprising :

— infant classes for children of 6-7 years of age ;
— first-level classes : 4 forms ;
— second-level classes : 3 forms ; and
— third-level classes : 3 forms (which do not include professional education),

without mentioning kindergartens for children of 3 to 6, set up in factories, offices, construction sites, agricultural co-operatives, etc.

Thanks to the tremendous efforts of the State and the population, nearly 4 million children are now going to school (including infant classes), i.e. 2.5 times as many as in 1955-56. Each commune now has a first-level school ; there is one second-level school for every 3 or 4 communes, and every province has several third-level schools.

The development of general education necessitates the creation of a whole network of pedagogical schools — elementary, secondary and superior. At the beginning, the curriculum at these schools was shortened ; but programmes now have been re-adjusted :

— five years' training for teachers of third-level schools (following graduation from ten-year general education schools) ;
— two years' training for second-level school teachers ; (following graduation from ten-year schools) ;
— two years' training for first-level school teachers (following graduation from seven-year general education schools).

Continuing the tradition of the Resistance, teachers and pupils of general education establishments are made to participate in production work and in the country's political and social life. Teachers, with the help of the State and the population, have through their ingenuity overcome all material obstacles to create the tools necessary to teaching work. Political and ideological education is the internal mainspring of all education. Whoever

happened to visit schools in the D.R.V. in the weeks following the murder by the Americans and their agents of the young patriot Nguyen Van Troi on October 15, 1964, could see how millions of pupils and students had reacted to this crime : their hearts filled with hatred for the enemy, all were determined to work still harder so as to be worthy of the murdered hero.

The fundamental principle remains that of linking school with life, *i.e.* with production and the country's political and social life. The teachers receive precious help from the organizations of youth, pioneers and pupils' parents. However, the setting up of socialist structures and the building of the material and technical bases of socialism ask for a deepening of that principle. One must give the pupils precise and useful scientific knowledge ; but one must also prepare them for great and arduous tasks, so that they can continue the revolutionary work of the older generation. At present, the youth no longer know the misery and humiliations of the former regime : how can one transmit to them the revolutionary spirit of their elders ?

Production work is regularly carried out in the shops and gardens of the schools ; once a month, teachers and pupils participate in the repairing of roads and dykes, reforestation work or the building of factories, etc. This intermittent participation in production work of course helps the young people get a concrete idea of the tasks of national construction ; however the schools are progressing towards a more organic participation which would turn them into veritable "animating centres of technique and culture" of their respective regions. The pupils' production work brings in appreciable material results, but this should not overshadow its educational importance. In the course of the carrying out of this pedagogical principle, appear the first outlines of a polytechnic education, which initiates the pupils in "the basic principles of production processes and in the use of the more elementary tools and machines." To avoid all deviation in the implementation of this principle, the targets had to be clearly defined :

— to inculcate in the pupils a new attitude towards work, made of courage, creative spirit and love of work and the workers ;

— to link theoretical knowledge with technical knowledge ; to teach the pupils how to apply their scientific knowledge to production and to enrich what has been learnt in books by actual practice ; and

— to acquire working habits and ability so as to produce material wealth.

One must be careful not to fall into the error of "technicism", which consists in neglecting the educational side and the acquisition of fundamental scientific notions.

The renovation of the economic and cultural life of the villages, closely linked with the progress achieved by agricultural co-operatives, necessitates a continual re-adjustment of the content and methods of general education.

In a country where agricultural work remains hard, there is a big risk of seeing school graduates either leave their villages or, if they don't do so, become completely unfit for the tasks awaiting them. At present, tens of thousands of seventh-formers and an increasing number of tenth-formers leaving school every year remain at their villages to work in agricultural co-operatives. One of the urgent problems of our system of education is to supply them with the necessary knowledge to work at the renovation of techniques and habits in the countryside, while arming them with an adequate moral and ideological formation which inculcates upon them the love of manual work, of their villages and ricefields. The task is arduous and complex, but we think we can fulfil it by going deep into the principles and methods sprung from our general line of a revolutionary education. Numerous experiments are being carried out, and they are pointing out the way to be followed. The merit of the Bacly school is to have conducted a valuable experiment right from the beginning : with the help of superior authorities, it has worked out methods, principles and practical solutions which have served as examples for teachers all over the country. In this volume, the reader will find a special article on Bacly. Our schools are engaged in seeking ways and means of ensuring an ever more organic participation of education in the life of the country.

The development of education in the mountain regions.

Mountain regions occupy two-thirds of the territory of the D.R.V. with about 13% of the population. They are inhabited by numerous national minorities, some of them numbering hundreds of thousands, others barely a thousand. The old regime had left these regions in a state of economic and cultural backwardness even worse than that of the plains. Most of the minorities did not know how to use either plough or fertilizer, and nearly 100% of the people were illiterate. Superstitions held sway. Malaria decimated whole regions. The Thais were the only ones to have a script. Communications were most difficult.

The policy of the Workers' Party and the D.R.V. Government towards those minorities is defined in three words : union, equality, help. The objective is to bring them up to the level of the people of the plains. The policy has been carried out through the endeavour of the State and popular organizations.

The first task in the field of education has been the liquidation of illiteracy. With this end in view, the Thai script was improved and scripts were devised for other languages, Tay-Nung and Meo in particular. The reform of the Thai script, begun in the years of Resistance, was completed in 1957. Since then, it has been used in the writing of textbooks and local journals. The Tay-Nung and Meo script were devised in 1959 and 1960 respectively. These innovations have been enthusiastically hailed by the national minorities, who within the space of a few years have witnessed a whole series of democratic reforms, the elimination of insecurity, the introduction of new agricultural techniques, the setting up of agricultural co-operatives, mining enterprises, forestry exploitations, State farms, and the gradual liquidation of malaria.

In the low-lying and middle areas of the mountain regions, illiteracy was liquidated by 1961. General education and complementary education for grown-ups have made rapid progress. Education has contributed to doing away with superstitions, and raising the political and ideological level of the minority people ; while living formerly in separated groups among which dissensions were fostered by reactionary elements, they now unite to build a new economy.

Answering the call of the Party, thousands of teachers have gone to the mountain regions, where they work in particularly difficult conditions. They have to adapt themselves to the habits and customs of the minority people, learn to speak their languages, and make their way to the remotest hamlets located on the high peaks to teach the children there.

The scattered state of the population and the difficulties in communication create particular conditions which have to be taken into account in the organization of education. Thus, in the anti-illiteracy struggle, one must not, as in the plains, try to rapidly raise the cultural level of the whole population, but concentrate one's efforts on certain social strata, which will also receive immediate complementary instruction : political cadres, youth, etc. Sometimes, instructors are sent to hamlets with only 5 or 6 households, where they will devote their efforts simultaneously to the anti-illiteracy struggle, complementary education, infant classes and general education, besides secretarial work for the administrative committee.

For the people of the remotest regions, those living on the high peaks in particular, boarding-schools have been set up in adequate places to which children of 6-7 years of age are admitted ; they are given instruction for several years. At present, teachers' training schools for first-level and second-level schools are being run in those regions. Hundreds of students sprung from the minorities are now working in Hanoi University, and many have graduated as engineers or doctors.

In those regions with plenty of uncultivated land and where many of the youth have but a rudimentary instruction, successful experiments have been conducted with schools where the pupils carry out at the same time studies and production work. In many districts, there are schools with about a hundred pupils from 16 to 22 years of age whose time is equally taken up by studies and production work. They reclaim and till a few dozen hectares of land ; the returns finance the running of the school. Classes constitute production groups in which the pupils are initiated in new agricultural techniques and the management of collective work. Curricula are adapted to those conditions. The main objective is to form animators for agricultural co-operatives which already group the majority of the population.

This type of school, besides accounting for considerable savings for the State budget, has the advantage of forming young people with a fair amount of education (first or second level) and at the same time practical experience in production and management work. (See article : *With the Pioneers of Hoa Binh).* Educational development going abreast with economic development, life of the national minorities is being radically transformed.

EDUCATION AND REVOLUTION

Surveying the past twenty years, (1945-1965), we can see that in spite of a long and destructive war, in spite of the constant threats of war imposed by American imperialism for the last ten years, in spite of the fact that everything was started from scratch, the D.R.V. has obtained great results in the field of education. Illiteracy has been liquidated, and complementary education is being given to a million grown-ups. Total enrolment in North Vietnam's general education schools was 2,666,000 in 1964, as against barely 567,300 for the whole of Vietnam in 1939. Nearly one and a half million children are going to infant classes. There are 26,300 university students as against 600 in 1939, and 35,600 vocational school students as against a negligible number under the colonial regime. (1)

Qualitative changes are no less important.

Education, which was the tool of colonial domination, is now in the service of the national popular revolution and actively helps in the building of socialism and in the struggle for national reunification. The national language, considerably enriched, is now the medium of instruction. The social origin of students and pupils has completely changed : the children of workers and peasants now form the bulk of the pupils and students. Many cadres of worker and peasant origin had been sent to follow courses of complementary education which have later on enabled them to go on to the University.

(1) The main figures are given in a table following this article.

Education has contributed to gradually making up for the lag of the national minorities by raising their cultural level, thus giving concrete shape to the policy of equality and mutual help between the various nationalities of the country.

Education has supplied the national economy and administrative and cultural organs with technical, managerial and political cadres. Of course these cadres need time to acquire the necessary experience for building and managing a modern economy, but already they possess the basic knowledge and, in the case of most of them, an adequate political and ideological formation which will help them tackle difficult tasks successfully.

Our opinion is that all these results are due, first and foremost, to the correctness of the general line of education which is conceived not as an independent activity linked up with an abstract ideal, but as part and parcel of the revolutionary movement, which must serve the revolution and is therefore in constant evolution. This helps determine the objective of education, the type of man that must be formed, and the content of education at each revolutionary stage. And this content in its turn determines the methods to be applied. One must form "a new generation which continues the revolutionary work of our people, perpetuates and develops their finest traditions ; fighters who are inspired in every one of their actions by revolutionary heroism ; workers of a new type, with an all-round formation, having a firm grasp of technique and possessing culture, healthy and ready to work in a creative fashion for the building of socialism, ready to defend the fatherland".

It goes without saying that to turn this ideal into reality, a daily struggle is necessary for the liquidation of the old conceptions, which separated school from life, and which may still linger among pupils, teachers and pupils' parents.

To reach that objective, school education must no longer confine itself to transmitting knowledge, but must on the one hand closely link studies with production, and on the other, include in the formation of the pupils and as an essential part of it a good political and ideological training. The practice of production work, including elementary manual work, and participation in the country's political and social life are indispensable for the formation of high revolutionary ethics.

An integral part of revolutionary work, education is built by the people and for the people. In education work, the mass line must be strictly applied. The State and the body of teachers, left to their sole forces, cannot achieve an undertaking of such magnitude, particularly in a country having at the beginning no technical and material means, and no competent personnel. The mass of our people have grown conscious of the importance of education work and have given it all necessary help. Material help : in every commune, town quarter, factory, the impetus started by the August Revolution has continued ; the people supply materials, money and voluntary work to build schools, buy equipment and finance the running of classes. Educational help too : people from all walks of life have volunteered to teach in anti-illiteracy, infant and complementary education classes. Peasants and workers directly participate in the education of young people by initiating them in production work, keeping an eye on their conduct outside class hours, suggesting new forms of education and helping in giving vocational guidance to the young.

We have full confidence in the popular masses and have entrusted them with education work. We can only congratulate ourselves on having followed such a line. Without the help of the great masses, education work would not have known such scope and vigour. A decisive role has been played by mass, youth, women's, and trade union organizations, by agricultural co-operatives, and, this goes without saying, by organs of State power.

Last but not least, the important role of the teachers should not be forgotten. Formed in the traditions of the Resistance, imbued with the will to serve their country, our teachers have joyfully accepted the most difficult tasks, while their remuneration is, this must be admitted, still quite modest. They have brought into play a great deal of devotedness and ingenuity, and have highly developed the spirit of self-reliance in building schools with the help of the masses and in perfecting themselves. They share the life of the peasants, participate in the hardest field-work to give example and initiation to their pupils, walk to the remotest mountain hamlets to give education to children

of the national minorities. Even University professors, like cadres at all levels, are satisfied with a modest manner of living and quite willingly participate in manual work.

Indeed, the same mainspring is working in all those mass organizations and State organs and in the teaching profession to give them daily guidance, to infuse into them this revolutionary spirit which enables them to overcome all difficulties, make all necessary efforts and accept all sacrifices, which ensures good co-ordination between all organizations, and keeps education at all moments integrated to the revolutionary movement — the *sine qua non* condition of its vitality. This mainspring is the leadership given by the Workers' Party, whose Marxist-Leninist doctrine constitutes for education the best of bases and the best of ferments.

At the head of the Party and the Government, President Ho Chi Minh has been and is for our people the greatest of educators ; his directions and recommendations, the example set by him to all, have been and remain for our educators the best of compasses.

V.S.

(This article has been written with the precious collaboration of Comrades Nguyen Si Ty, Nguyen Luong Ngoc, and Hoang Trong Hanh, of the Hanoi Institute of Pedagogical Science).

THE DEVELOPMENT OF EDUCATION IN THE D.R.V.

(Please note that the figures given for 1938-39, the most prosperous year of the colonial regime, concern the whole of Vietnam or even all three countries of Indochina : Vietnam, Cambodia and Laos. Present figures concern only the D.R.V. (North Vietnam), with a population of 18 millions and an area of nearly 160,000 square kilometres).

	1939 (the whole of Vietnam)	1955 (D.R.V.)	1964-65 (D.R.V.)
General Education			
Enrolment	567,300	746,000	2,666,000
Infant classes		522,500	780,000
Teaching personnel			75,000
Higher Education			
Number of students	600	1,200	26,300
Teaching personnel			2,200
Vocational schools			
Enrolment		2,800	35,600
Complementary education for grown-ups			
Enrolment			about a million, among them 200,000 for second-level education
Mountain regions (national minorities)			
General education			293,500
Pupils in infant classes			140,000
Students in professional schools			3,000

THE STAGES OF DEVELOPMENT

1945-46 2 million people freed from illiteracy

Enrolment in primary and secondary schools : 360,000
Enrolment in higher and professional schools : 2,000
(The above figures do not include Nambô — the South — where hostilities began as early as 23rd September 1945).

1946-54 10 million people freed from illiteracy

General education : 700,000 (infant classes : 300,000)
Graduates from higher education schools : 600.

1954-64 Number of grown-ups having gone through complementary education :

First level (4 classes) :	2,760,250
Second level (7 classes) :	377,170
Third level (10 classes) :	37,245
Number of University graduates :	15,289
Number of graduates from vocational schools :	57,127

The repeated bombing raids on North Vietnam by Yankee pirate aircraft since February 1965 have put to the test the morale of the body of teachers of the D.R.V. Many schools have been bombed and strafed. Everywhere school masters and mistresses have shown exemplary conduct : under heavy bombing and strafing, with calm and courage they have taken their pupils to shelter, and gone and cared for the wounded in defiance of all danger. Teachers and senior students fire on pirate aircraft, side by side with the entire population mobilized against the aggressors. In places subjected to repeated raids, classes go on functioning with adequate changes in time-tables and activities. Teachers and students participate in defence work and contribute their efforts to those of the whole population. Yankee aggression has not been able to interrupt the education work, which has been carried on with renewed ardour. By putting political and ideological training in the heart of education, the D.R.V. schools have prepared teachers and students for the most arduous and complex tasks.

The liquidation of illiteracy, and complementary education for grown-ups in the Democratic Republic of Vietnam

NGO VAN CAT

STAGES THAT HAVE BEEN GONE THROUGH

For nearly a century under the colonial regime, the Vietnamese people had been systematically kept in ignorance. Ninety-five per cent of the population were illiterate : this rate was even higher for the women and reached 100% for the remoter hamlets in the plains and for the mountain regions.

The victorious August 1945 Revolution assigned to the Vietnamese people the urgent and important task of liquidating illiteracy which affected some 15 million people from 8 to 50 years of age.

On September 3, 1945, at the first meeting of the provisional Government, President Ho Chi Minh proposed that a resolute struggle be carried out by the whole nation against three enemies : famine, foreign aggression and illiteracy. While the effect of the famine caused by French colonialism and Japanese occupation (two million victims) was still felt, the colonialists threatened

the young Democratic Republic of Vietnam with a war of reconquest. It was in those extremely difficult conditions that a mass movement to eliminate illiteracy was launched. More than a year later, when the Resistance war spread to the whole country (December 1946), two and a half million people had been liberated from illiteracy. The movement developed without cease in spite of the arduous 9-year war, and at the time of the cessation of hostilities, 10 million people had been liberated from the darkness of ignorance.

In July 1954, peace was restored in Indochina, and North Vietnam entered a new revolutionary stage — that of the socialist revolution. It was necessary urgently to complete the liquidation of illiteracy and on this basis unremittingly to raise the level of education, for the socialist revolution demands an ever higher cultural, scientific and technical level of every citizen. This last assault took place amidst difficult conditions : the national economy destroyed by 15 years of war had to be rehabilitated within the shortest delay ; nation-wide land reform needed tens of thousands of cadres and mobilized all working peasants. The illiterate people still left were mostly women with small children, itinerant workers and people living in straitened circumstances. In spite of this, the Vietnam Workers' Party and the Government of the Democratic Republic of Vietnam worked out a 3-year plan for the eradication of illiteracy, starting from 1956. The whole nation was mobilized, and active measures taken for a general offensive against illiteracy.

By December 1958, illiteracy had been essentially eliminated in North Vietnam : in the plain, 93.4% of the people from 12 to 50 had learnt to read and write. In the highlands however anti-illiteracy work had only been partly completed.

Therefore, not only had the imperialists been driven out of North Vietnam for ever and the regime of colonial and feudal exploitation abolished, but illiteracy, the consequence of the colonial and feudal yoke, had also been eradicated. The Vietnamese people, who have proudly risen up, have become the masters of their country and their destiny ; they are conquering culture, science and technique and with their own hands and wisdom are building a new life and socialism.

Parallel with the struggle against illiteracy, since 1948 and during the resistance war, complementary education for grown-ups had been organized and developed without cease.

At the beginning, courses were opened for people who had just learnt to read and write, aimed at consolidating this newly-acquired knowledge and teaching them elements of science, hygiene, arithmetics, and the history and geography of the country.

During the war, there were constantly from 300,000 to 400,000 persons attending complementary courses for grown-ups corresponding to primary education classes. Together with elements of culture, the Party line and the policies worked out and principal measures taken by the State penetrated into the masses through the channel of adult education, from North to South, in the enemy-occupied as well as in the liberated zones. That was how patriotism and hatred for the aggressors, enthusiasm and confidence in the final victory were infused into the people and the experiences obtained in the struggle against the enemy disseminated ; and this ideological weapon greatly contributed to frustrating the enemy's dangerous machinations in the political, economic and military fields.

In 1951, while the resistance was in full swing, a complementary education school was opened to cadres in the heart of the jungle. Courses corresponding to the second level of general education were created for the first time in this school. Later on, the same education was given in administrative organs, army units, armament workshops, etc. with this difference : the learners didn't leave off work and production. Thus the cultural level of workers, peasants, cadres and armymen was raised year by year, and at the time when peace was restored and illiteracy had been done away with, the adult education movement had every favourable condition to grow to greater scope and reach a higher level.

In 1962, there were 1,200,00 persons attending adult courses : 990,000 for the first level (primary), 220,000 for the second level (junior secondary) and over 20,000 for the third level (senior secondary). The second level of general education had become of great importance and a great number of workers,

peasants and young cadres were attending with enthusiasm classes of the second and third levels without giving up their work.

In fact, studying while doing production work constitutes the essential form. Only a small number of workers are studying at regular second and third level schools. In 1962, over 7,500 young workers and peasants attended 13 "complementary education schools for workers and peasants" which prepared them for further studies at secondary vocational schools or higher education establishments. Also in 1962, nearly 4,000 cadres of State organs and mass organizations who would have met with difficulties if they had had to carry out abreast studies and work, were sent to short-term courses lasting from a few months to one or two years in special schools opened in each province.

The principal lessons of our experience.

At present, the anti-illiteracy struggle is still going on in the remoter villages of the highlands. The national minorities who had no script and didn't know Vietnamese writing now have their own scripts and are taught in their mother tongue. The *Meo* and *Tay - Nung* scripts have been created and taught in highland schools, to the great joy of the national minorities. The Thai writing has been improved.

The main effort at present in adult education aims at developing and raising gradually the educational level, combining general education with technical education and professional improvement and improving conditions for teaching and study.

The victorious struggle against illiteracy and the uninterrupted development of adult education have allowed us to reach the following conclusions concerning the successes gained and the future tasks.

I. The liquidation of illiteracy and adult education are a political, revolutionary work closely bound to that of improving the political and ideological conciousness, and the fighting and productive potential of the great masses liberated from the yoke of the old regime.

To organize education for millions of people is not an easy task especially in a poor and backward country devastated by

war. The people studied while carrying out an armed struggle. Besides, a veritable army of anti-illiteracy fighters had to be set up, and the question arose as to where to find them, how to pay them and ensure for them the minimum working conditions. President Ho Chi Minh has pointed out the solution to the problem : to rely on the masses, to launch a large-scale movement in which the people set themselves the task of liberating themselves from ignorance.

The Vietnamese people possess a traditional passion for learning, and in the course of their age-old history their ardent patriotism has manifested itself in their bitter struggle against foreign invaders, in the great resistance war which ended with the resounding victory of Dien Bien Phu, in the socialist construction of the North and the struggle for peaceful national reunification. Bringing into play those fundamental factors, we have carried out an intense agitation and explanation work among the people of all walks of life, we have popularized the aim and significance of this great work — the liquidation of illiteracy and the development of adult education — and its effect on the winning and consolidating of national independence, on the resistance war and on national construction. We have inculcated in everybody the idea that an ignorant people is a weak people, and that to make Vietnam a rich and strong country everybody must learn to read and write so as to be able later to study science and technique. In the press, over the radio, at meetings, in mass organizations, town quarters and villages, in songs, plays, exhibitions, etc. propaganda and explanation work has been carried out amidst this revolutionary enthusiasm in which is bathed our people's life.

Thus right from the beginning, the liquidation of illiteracy and complementary education for grown-ups have been considered a political and revolutionary work closely bound to the work of heightening the political and ideological consciousness, the fighting and productive potential and the creativeness of the popular masses. This work is to be accomplished both by the State and by the masses.

In those seething days of August 1945 when our entire nation rose up to win their independence, set up the people's power,

organize the armed forces, cultivate even the smallest plot of ground in order to check famine..., learning was considered a sacred task. President Ho Chi Minh's appeal resounded everywhere, going to everybody's heart and stimulating him into action :

"To safeguard our independence and to make our country strong and prosperous, every Vietnamese must know his rights and obligations, must take part in national construction and in the first place, must be able to read and write in the national language."

Each revolutionary stage, each political task was reflected in the watchword of mass education :

"Against famine, against illiteracy, against foreign aggression".

"To go to school means to love the fatherland".

"Every class is a propaganda centre for the Resistance", etc.

Putting into practice the watchword "Every class is a propaganda centre for the Resistance", adult courses were held in the very heart of the enemy-occupied zones, the people's initiatives were developed, teachers and students kept watch, hid books, and held classes in the intervals between battles.

The Party and Government, the regional organs of propaganda constantly guided the cadres in linking the content of the courses with the economic and political tasks of each region at each stage. The content of the programmes and that of the courses were constantly reviewed so that they should not be divorced from reality, and so that those who went to school should find in the lessons the knowledge necessary for the solution of burning questions cropping up in life : Why was it necessary to wage the resistance war ? Why would the Resistance inevitably lead to victory ? How to oppose enemy raids ? How to make the enemy see nothing and hear nothing ? Or : why did the peasants live in misery ? What advantages would the overthrowing of landlords bring to the peasants ? What are the advantages of collectivization ? etc. The knowledge of mathematics, physics, history, geography and the study of the national language, contributed to serving production and improving work in different branches of activity.

At present while the central task of North Vietnam is to build socialism and to support the revolutionary movement in the South adult education is in full swing, for everyone realizes clearly that without a high level of culture, science and technique, no positive contribution can be made to socialist construction. This consciousness determines our compatriots' attitude towards education and the content of educational work, which should meet the needs of the new revolutionary stage.

II. To have a mass line, mobilize all political, economic and cultural forces of the whole people and follow this mass line to solve practical problems.

Once the masses have realized that to fight against ignorance is their own task, they will always find ways and means to solve practical problems and to learn. Even the old folk and the disabled don't let themselves be surpassed by the other people.

Literate people whatever their age and their social status, quite willingly engage in educational work. In his appeal, President Ho Chi Minh said : "Husbands should teach their wives, younger people should teach their elders, sons and daughters should teach their old parents."

Children also bring their contribution : they engage in propaganda work, do housekeeping and baby-sitting so that their mothers can go to school. Many children are efficient little teachers.

The mass character of the movement must manifest itself in organizational as well as in educational work.

The forms of organization must in fact be extremely flexible and not include unified and strict time-tables as in regular schools. The people learn at the time that suits them. There is no need to gather a great number of learners in the same class. One may organize separate classes or teachers may come and give lessons to the people at their homes. Revision and complementary classes are organized for workers who have been absent from school. In the countryside, study plans are set up according to the agricultural calendar ; the co-operatives manage study as they do production work, and reserve more or less time for

study according to the rhythm of agricultural work. In the towns, workers who work in shifts study before or after work time.

Anti-illiteracy fighters are not paid. The methods are adapted to the cultural level of the students. The teachers help them understand and remember the lessons by setting the latter in easy-to-memorize verses, repeating their explanations, trying to understand the psychology of every learner and the difficulties he meets with, in order to help him in an efficient and concrete way. Anti-illiteracy fighters and teachers of complementary education number hundreds of thousands and in this noble work many of them are worthy of the title "Anonymous Heroes" given to them by President Ho Chi Minh.

In the stage of complementary education development, conditions are no longer the same as in the course of the liquidation of illiteracy, but the main thing is always to give full consideration to the conditions of students who study while working, to form a contingent of teachers comparable to those "anonymous heroes" who carried out the struggle against illiteracy.

Like all liberation work of the masses, the liquidation of illiteracy and the improvement of the cultural standard of the working people should be the work of the masses themselves who, once they have become conscious, willingly undertake this work.

In this mass movement the decisive role is played by the strict leadership of the Party and the State which, from central to regional level, join their activities with those of the mass organizations (youth organizations, women's unions, trade-unions, peasants' associations...). If in our country the liquidation of illiteracy and so many other revolutionary movements have grown to such a remarkable scope and have achieved good results, it is precisely because they have followed a mass line. Under the leadership of the Party and the State, the mass organizations assume the responsibility of explaining, mobilizing and organizing the masses, and of making full use of their possibilities with a view to fulfilling the assigned tasks. This line applied to the anti-illiteracy struggle has developed the creative power of the great popular masses who have overcome difficulties which had been thought insurmountable.

a) Propaganda and mobilization work among the masses

Books, the press, the radio, circulars and directives are extremely important. But they fail to penetrate into the heart of the countryside and to persuade the people if they are not backed by such lively and attractive "mass" measures as :

— watchwords ; leaflets to be widely distributed ;

— processions and other spectacular forms of propaganda including drum-beating, lion dances, parades of giant-sized models of pen-holders and books, etc.

— Songs, dances and plays performed by artistic ensembles imparting to the people hatred for colonialism and its aftermath, illiteracy, and exhorting them to progress towards the light brought by the new regime ;

— the selling of spelling-books to illiterate people, the invitation to literate people to pass under "arches of honour" ;

— the composition of witty epigrams to mock at young people who have not yet made up their minds to go to school ; for instance :

"To have a literate husband makes you as happy as a fairy,
But what a sad lot it is to marry an illiterate !"

— Towards the end of the last stage, everyone who meets with difficulties in his or her study or lacks determination is made to understand the disadvantages of remaining illiterate and the advantages enjoyed by a literate (e.g. to be able to write to her soldier husband at the front, take notes or keep accounts, get a better knowledge of the misdeeds of the old regime and the bright prospects opened up by the new regime, etc.). A convinced person becomes a propagandist who by his heartfelt words and the concrete results he has obtained, often proves irresistibly persuasive.

— At the end of each course, prizes and certificates are given to those who have just been liberated from illiteracy. On this occasion illiterate people are called on to enrol in the next course. The best scholars are publicly praised. Solemn ceremonies are held to confer honours on families, villages, districts and provinces which have succeeded in doing away with illiteracy. Patriotic emulation drives are launched to stimulate the people.

It is necessary to frustrate the sabotage schemes of reactionary elements who want to prevent their wives, children and parents from learning to read and write. Some of them may go to the length of resorting to violence against the students or committing thefts while everybody is going to school. Reactionary priests have tried to persuade believers that to go to school is to "lose" their faith.

One must mention the considerable effects of the appeals and congratulations sent by President Ho Chi Minh to anti-illiteracy cadres, students and regions that have achieved success in the liquidation of illiteracy. The government has given rewards, including Resistance and Labour medals, to villages, districts or provinces which have fulfilled or overfulfilled the targets of the anti-illiteracy plan.

b) The forms of organization of classes.

The classes assume various forms :

— spare-time classes ;

— classes organized according to the conditions of work of each region and each season ;

— classes adapted to different categories of students. Evening classes are organized in the towns. In the countryside there are essentially mid-day classes. When harvest-time comes, school may be suspended, but supplementary classes may be opened in the morning, when the peasants do not work in the fields.

Most of the time, each class has but a small number of students, being organized for a single hamlet or even for a single family.

Sometimes, "clandestine" classes are held for timid young men who will not join classes with girls before they have acquired a minimum of knowledge.

For the sake of cadres who are frequently absent for reason of service, special classes are organized to give them the lessons they have missed.

The most difficult question lies in the creation of classes for fishermen and generally for all those who have to travel frequently on account of their occupations : under those conditions a teacher should accompany them or arrangements should be made so that they may learn from one another.

In the countryside, even during harvest time when school is suspended, the teachers seek to help their students revise their lessons : letters are written on placards, on the backs of buffaloes, or on the people's palm-leaf hats ; blackboards are placed in the shade of a tree or in threshing-yards so that the workers may take a look at their lessons during breaks and even while working.

We have had to oppose the tendency to organize regular full-time classes, which do not conform to the conditions of the learners, chiefly in the last years of the fight against illiteracy.

c) School premises and equipment.

After the movement has grown in scope, the problem of school premises and equipment is a difficult one. In particular, during the resistance war, there was a great shortage of books, exercise-books, paper, ink, metallic pens, etc.

Premises : if there is not enough room in general education schools, classes are held in private houses. If there are not enough desks, one can use beds or even bamboo baskets put upside down. If the forest is near, teachers and pupils may fetch bamboo and wood to make tables and benches and build classrooms.

Spelling-books : During the war there was a shortage of textbooks even for the teachers. The most rudimentary means were resorted to for getting more of them. Pupils in general education schools used to copy lessons for the illiterates as dictation exercises.

Other school equipment : During the resistance war, paper was scarce. Many students had to use banana leaves instead. Some kinds of leaves and fruit found in the forest gave a liquid which could be used in place of ink. A bit of charred wood or half-baked brick might be used to write on the floor or on the ground.

If conditions are favourable, we do our best to help teachers and students. But once they have become conscious of the importance of educational work, the masses are fully capable of overcoming all difficulties to remedy the shortage of materials.

d) Rapid formation of teachers.

The number of teachers amount to hundreds of thousands. How to impart to them a method of teaching likely to bring in the greatest results within the shortest time ?

We have organized short-term training courses run by regional administrations and mass organizations. In general, those courses last no more than 5 or 6 days during which the main thing is to give political and ideological education to the future teachers so that they may grow fully conscious of their responsibilities and love their work. Only a full grasp of the revolutionary significance of their work can give them this ardour which enables them to overcome all difficulties.

Problems of organization and teaching are also dealt with in the programme of training but chiefly in the form of exchanges of experiences. The successes already gained give enlightenment to the teachers while strengthening their will to fulfil the tasks assigned to them by the people and the revolution.

Many teachers have been elected patriotic emulation fighters or labour heroes or have received honour certificates or medals. They have upheld their sense of responsibility, served the people unconditionally, unceasingly improved their teaching methods, overcome all obstacles to rapidly liberate their compatriots from the darkness of ignorance. They have made many innovations in teaching the people to read and write. For example, they have composed verses to help the students memorize letters or distinguish between those which present some likeness with each other :

i and t both have appendices, but
i is short and has a dot, t is long and has a bar.
o is round like an egg,
ô wears a hat, and o' a moustache etc.

It is not difficult to learn the Vietnamese script. Any person studying one hour a day may be liberated from illiteracy in three or four months. When the movement is in full swing, we launch emulation drives in which the average time — 72 days — is further shortened. These emulation movements stimulate the students and induce them to redouble their efforts to reduce learning time.

We have mentioned above the tendency among some cadres to organize regular full-time courses, which created difficulties for the masses and hindered their daily activities. There were also, in certain periods and certain places, cadres and teachers who, deviating from the mass line, used compulsion :

— They stopped people on the roads, and carried out a quick "control exam" to detect illiterates.

— They barred illiterates from markets or made them go through side doors, with a view to humiliating them.

— They drew black circles on the doors of the illiterates to mock at them.

— They refused passes to illiterates.

— They obliged illiterates to go to the district centre, bringing along their own food, to attend a course...

Those measures, which did not rely on mass consciousness, were erroneous and did not lead to good results. A mass line is even more necessary with regard to the national minorities.

III. To follow up the liquidation of illiteracy with complementary education and consider complementary education given to the working people, chiefly cadres and young people, as an essential educational task.

The liquidation of illiteracy is only the first step in an important long-term work : the continuous improvement of the people's cultural life.

Today as well as during the resistance war, including the time when we had to concentrate our efforts on the elimination of illiteracy, complementary education for adults has continuously developed.

At the restoration of peace, North Vietnam went on from the people's democratic national revolution to the socialist revolution.

The first five-year plan assigns to us the task of training tens of thousands of superior cadres, hundreds of thousands of secondary technical cadres, hundreds of thousands of skilled workers, not counting a great number of managing cadres for thousands of agricultural co-operatives. To fulfil this task, one must "attach great importance to complementary education of

cadres, workers, peasants and armymen, develop general and higher education vigorously and steadily and expand professional education" (Resolution of the Third National Congress of the Vietnam Workers' Party). But the development of general, higher, and professional education, like the whole of the revolutionary work, depends on the rapid development of production. To step up production rapidly, the people engaged in production should reach such a cultural level as would enable them to grasp and improve technique and increase productivity. That is why we have given first priority to complementary education and technical improvement of the working people. The vigorous development of complementary education together with general education has contributed to supplying a sufficient number of students for higher education establishments and professional schools. Thus, complementary education follows the liquidation of illiteracy and constitutes a superior stage. But it must always remain a mass movement in which the masses, conscious of their rights and obligations, bring into full play their possibilities and their initiative to solve problems concerning the time of study, the organization of classes and the supply of teachers.

Recipients of complementary education

The liquidation of illiteracy among people from 12 to 50 years of age is a bright success of our cultural policy. This transcends the cultural field and has a considerable effect on the political and social planes.

Switching over to the stage of complementary education, we *concentrate our efforts on cadres and young people* (although everyone is encouraged to study), for the development of production and national construction requires the rapid raising of their cultural and technical level and of their managing capacity.

According to their role in work and production, their age and their training, each category of cadres or youth should reach such and such a level and follow such and such a programme. This determination expresses the aim of complementary education — to serve production and national construction, satisfy

the legitimate aspirations of those who wish to raise their cultural and professional level — and conforms to the possibilities of the State and the people regarding the development of general education. The best means should be reserved for complementary education courses organized for the principal persons concerned, who are often very busy with their daily work and cannot attend classes regularly. However, in view of the requirements of the national economy, we have always tried to create for them the most favourable conditions so that the improvement of their standard may catch up with the evolution of society.

The problem of teachers

The growth of complementary education requires tens of thousands of teachers, whereas the number of persons having gone through the second level of general education is still small. As in the struggle against illiteracy, the problem cannot be solved by the State alone. One must rely on the masses, and make full use of their cultural possibilities. The mobilization of teachers for complementary education involves general education teachers and senior students, professional education students, higher education teachers and students, specialized cadres and technical cadres of various branches of activity. We even ask senior students of complementary education to teach their juniors. As in the anti-illiteracy struggle, general education teachers and pupils and university students play an important role in complementary education. Many general education schools establish brotherhood relationships with factories, state-farms and co-operatives : the students go there to learn how to do productive work and to give complementary education to workers, peasants, and this at all times of the day, because the schools function in two shifts and students are always available for teaching. University students also participate in great numbers in complementary education. But the core of the movement is constituted by general education teachers who are in fairly great numbers and who besides, possess pedagogical knowledge and experience. They give guidance to complementary education teachers and play a key role in improvement courses organized for them.

We have also paid attention to the training and organizing of a contingent of teachers specialized in complementary education. In a certain number of teachers' training schools for primary and junior secondary establishments,, there is a section for the training of complementary education teachers. Besides, in the curriculum of all normal schools, from higher to elementary level, is included a short-term course on adult psychology and appropriate teaching methods so that after their graduation, the students may be appointed either complementary education teachers or general education teachers, but in the latter case they should be capable of doing at the same time complementary education work.

IV. The content of education is rationally modified. It is bound to life and efficiently serves production and labour.

Propaganda and explanation work among the people to stir up the thirst for knowledge, the mobilization of literate people as unpaid teachers and organizers full of initiative, etc. — all these measures turn education into a large-scale mass movement. On the other hand the content of education is an extremely important problem: what must one study and how, so as to serve the general interests and at the same time satisfy one's own aspirations? The answer to this question determines the ardour and perseverance of the learners and therefore the results of their study.

As adult students already possess some knowledge and experience of production and as they have to improve their productive capacity while learning, the content of adult education must be practical and at the same time simplified. "Practical" means that education should be bound to life and productive work, in order to meet political and economic requirements ; "simplified" means that one must concentrate one's efforts on the principal points, leaving aside secondary questions, so as not to prolong the period of learning.

On what basis can one simplify the content of education

Teaching is based on the practical knowledge acquired by workers, peasants and cadres in life and in the social struggle.

Lessons given in primary schools need no detailed explanations as for children. Adults also enjoy favourable conditions in studying the social sciences and biology. Thus studious students can complete in three or four years the curriculum of primary education by studying five or six hours a week in 2 evening sessions — and this while working at their jobs.

The programme may be simplified by concentrating on a certain number of subjects (mathematics and physics for workers, mathematics, chemistry and biology for peasants...) leaving aside for the time being non-indispensable subjects, which will be taken up later on when conditions permit.

In secondary education, the determination of the principal subjects is the essential way to shorten the period of learning and provide conditions for workers, peasants and cadres to acquire the knowledge necessary for the understanding, use, improvement and systematic study of technique.

To try constantly to impart to education a practical character without detriment to the general and systematic character of knowledge is a delicate problem.

It is absolutely necessary to give adult students general education which will help them understand the techniques they already know from experience. Chiefly in the case of the natural sciences, without a basic knowledge, one cannot grasp the science and technique applied to modern production. But how must this general knowledge be taught so as to conform to the needs of the revolution and meet the aspirations of the students ?

As early as 1948, in a letter sent to the anti-illiteracy fighters, President Ho Chi Minh wrote :

"Wherever illiteracy has been eliminated, participate in the patriotic emulation movement to make a step forward and teach our compatriots :

1. elements of hygiene to help them check diseases ;

2. elements of the sciences to help them fight against superstitions ;

3. the four arithmetical operations to help them put order in their daily activities ;

4. the history and geography of the country (in simplified form and put in verse), to raise their patriotism ; and

5. civil rights and duties to help them become good citizens.

Do that first ; later on we will advance further."

Since then, higher courses have been opened, but President Ho Chi Minh's instructions still guide the work of cadres and teachers and find expression in such new measures as :

— The drawing up of different complementary education programmes for workers, peasants, and cadres on the basis of the particularities and practical needs of each category. Thus cadres follow a relatively comprehensive programme, whereas the programme for workers reserves most of the time for Vietnamese, mathematics and physics, and that for peasants for Vietnamese, mathematics and biology.

— Besides, in every programme (that for workers for instance) stress is laid on certain parts of each subject, which deserve particular attention : engineering workers study mechanics in more detail, whereas electricians attach greater importance to electricity. Thus the programme consists of fundamental parts studied by workers of all branches of activity, and a supplementary part for each particular factory to serve production work in the region and at the plant.

— Close relationship between theory and practice is considered an extremely important pedagogical principle : it not only helps the students make use of their practical experience in grasping scientific principles and abstract notions, but also urges them to apply the knowledge acquired to the explanation and solution of questions posed by life and production. The principle of union between theoretical studies and their practical application is thus fully observed.

— Parallel with systematic general education, lectures are given on problems of general and special technique, aimed at consolidating, deepening and developing general knowledge, while improving work and stepping up production.

The programme for peasants consists of general education, and techniques of culture and animal husbandry, and their application.

However, the elaboration of a simplified and practical programme requires great efforts in compiling appropriate textbooks and improving teaching methods. This is not easy and we have groped our way for some time. We have gradually improved our work by stimulating without cease the creativeness of the masses whose experience is periodically summed up by the leading organs.

Conclusion

A poor and backward country which has just won back its independence and wants to build an advanced industry and agriculture must not separate the development of economy from that of culture, science and technique : the basis of the cultural revolution is the liquidation of illiteracy, and complementary education for the working people. This principle should inspire the two main aspects of the work of liquidation of illiteracy and complementary education : the organization of the movement and the content of teaching.

This principle inspires also the concrete direction of State affairs and creates the necessary conditions for the education movement to be maintained in any circumstance and be carried out together with political, economic and military activities, which it is its aim to serve.

To ensure a mass character for the elimination of illiteracy and for complementary education is a matter of principle. One should not confine the movement within a rigid framework of regular education with State-paid teachers. Besides, the aim of education must be concretely set and expressed in the content of teaching, which must be practical and simplified.

It must be recognized that we have worked under favourable conditions : education is given in the national language, and the Latin alphabet is used in the phonetic transcription of our language, the orthography of which is not too complicated. It is clear however that it is the solution of the fundamental problems summed up above that has decided our victories in the cultural field.

THE BACLY

PILOT SECONDARY SCHOOL

VU CAN and LUU DUC MOC

The district of Lynhan, with its flooded rice-fields and swamps, was the most wretched part of Hanam, itself the poorest province in the Red River delta. For centuries this sterile land could hardly feed its inhabitants. There the peasant worked twice as hard as elsewhere, wallowing waist-deep in mud to grow rice, replacing the buffalo at the plough when the animal refused to work in deep water. In summer, torrential rains turned the region into a sea of desolation in which all crops were submerged and isolated hamlets floated like buoys. Feudal and colonial exploitation further plunged the population into the darkest misery; ignorance was widespread and most village chiefs and notables, who could neither read nor write, had to use their finger-prints to sign.

The Revolution of August 1945 had only begun to bring some change to this sad situation when the country again became the prey of colonialist aggression. Heavily armed units of the French Expeditionary Corps occupied Hanam and other provinces in the delta, covering them with blockhouses, bunkers, watch-towers, barbed-wire and mine fields, mopping up district after district, village after village, destroying everything as they passed, perpetrating gruesome crimes against the population. In Hanam the inhabitants put up a fierce resistance against the aggressors

and made of their province a strong guerilla base, in which the enemy gained no headway. In the daytime they worked in the fields to make a living and to supply the resistance fighters; in the night time they attacked enemy posts and liquidated traitors and taught the three Rs in popular classes. They co-operated with the regular troops in inflicting heavy losses on the enemy, but when peace was restored in July 1954, Hanam province had been bled white: not a single hamlet remained standing.

Superhuman efforts had to be made to rebuild the country and take it along a new road, that of socialism. The Vietnamese countryside, in stagnation for centuries, then underwent great changes. Agrarian reform gave land to the tiller, and agricultural co-operation made it possible to build hydraulic works to irrigate parched land and drain flooded areas. It was only a beginning, but today thousands of hectares in Hanam province already produce two yearly crops where they used to produce only one. The peasant, freed from draught-animal work, now can think of his own education and that of his children. No longer miserable and starving, he is still poor, but of a decent poverty.

The cultural and ideological revolution, made at the same time as the economic revolution, has brought good results, giving a strong impulse to social progress. The same district of Lynhan which in colonial times had only one school, established in the district town, has now a wide network of educational establishments: each village has a 1st-level (primary) school, every two or three villages share a 2nd-level (junior) secondary school, and there is a 3rd-level secondary school for the whole district.

That is, in brief, the background of the birth and growth of the Bacly school, one of the fourteen 2nd-level secondary schools of the Lynhan district, in Hanam province, a school which was given the title of "pilot school" of the D.R.V. by the Education Ministry in October 1961.

Bacly School has a twelve-year old history dating from 1953, a year of severe trials preceding the historic year of the Dien Bien Phu battle. At the end of 1953, a group of secondary school teachers freshly graduated from the 3rd Interzone Normal School

were assigned to go into the enemy-occupied zone and organize clandestine classes for young people. For their work they had no textbooks, nothing but a hand-written curriculum. Before their departure, they were told by the chief of the Education Service : "Rely on the people, they will provide you with food and clothes and chiefly, they will help you build the schools. Just teach the children what you can remember, now you have left your school, if you can't do more. But inculcate in them the spirit of the Resistance and devotion to the Fatherland."

And that's how the Bacly secondary school came to be founded in February 1954, after many months of clandestine preparation. For the first school-year it had 300 students organized into four classes : three 5th-year classes and one 6th-year class. The Quangoc hamlet where the school was established was just two kilometres from the nearest enemy post. At night, children from various places in the district came furtively to attend the classes which, as a rule, began at 1 or 2 a.m. These classes were held in one group of houses for a few days, then changed to another. There were neither desks nor benches and the pupils, squatting on the ground, used small boards or wood blocks as writing-desks, and these were carefully hidden when the class was over, so as not to reveal the existence of the school to the enemy. After a time, in order to spare the children the fatigue and danger of going to school, and to keep the existence of the classes secret, a kind of boarding-school was organized, with the assistance of the local population : each family accepted two or three pupils from other localities saying that they were their relations when the enemy's agents came to investigate. The teachers and the older pupils dug underground caches in which they hid themselves in case of danger. When they were not studying, teachers and pupils actively participated in the struggle against the invader, sabotaging roads and bridges, fighting by the side of the guerillas, engaging in propaganda among the puppet troops to urge them to go over to the ranks of the Resistance.

The people did their utmost to ensure good functioning of the school and security for the teachers and pupils. As to the enemy, they hated these "resistance schools", ruthlessly massacred the pupils and set a price on the head of each teacher.

Young peasants going to evening classes. Sketch by **TO NGOC VAN**

When the war was over, the school began holding classes in the day-time. But the school was still to be built, equipment was lacking and there were not enough teachers. On the restoration of peace, the major preoccupation of the people's government was to take measures to avert famine and bring about the recovery of a totally ruined economy. The teachers of Bacly had to do what they could for themselves to organize their school, holding classes in the Village House. The pupils brought any desks and benches they could find, wood-blocks or bricks which they piled up. Sometimes, when the pupils stood up to salute the teacher, this queer furniture collapsed with a crash amidst repressed laughter. Two or three times a day, the pagoda bell rang out loudly to announce a recess.

To find a site for the school was a pressing matter. To have the means to build it was another problem. Should the government be asked to help ? Certainly not. The country had been bled white by colonialist exploitation and war, and the government had to spend so much money for more urgent tasks. With the experience gained during the Resistance, the Bacly teachers knew that they should rely on the people. They told the regional Party cadres of their intention and received the warm approval of the latter. On the cadres' advice they chose a site for the building of the school and made a detailed construction plan.

The chosen site was in the Tu Uyen hamlet in the village of Chungly. The village Party branch held a special meeting to discuss what assistance could be given for the building of the school. The village administrative committee, with the co-operation of people's organizations, launched a vast propaganda campaign in support of the project presented by the Bacly teachers. The latter and their pupils went from house to house to ask the villagers to co-operate, and a sponsoring committee was created in which well-known people participated. The situation was still difficult, many homes had not been reconstructed and yet, everybody was willing to help. Each family contributed what it could : a bamboo, a board, a few bundles of straw, a pile of bricks. The neighbouring villages also responded, and enough materials were soon collected to build the school.

Construction work started. The teachers and their pupils made up the major part of the labour force. After the classes, they prepared the ground and the foundations. Carpenters and villagers who were expert in bamboo work, volunteered their service. After a few months, on what had formerly been waste land covered with brush and full of shell and bomb craters, there stood three constructions with thatched roofs and bamboo panels. The six classrooms were equipped with simple but adequate wooden desks and benches. Lastly, the teachers and their pupils completed their collective work by building a dirt road linking the school with the village road. This was in 1957.

The green laboratory

As the economy of the country developed, the teachers of the D.R.V. increased in number and they now had more adequate means to carry out their tasks. Gone were the days of the itinerant school when they gave lessons in classrooms exposed to the weather, teaching with the help, not of texbooks but of their own memory. For each educational level, they now had at their disposal complete collections of textbooks written in Vietnamese. Diagrams for anatomy, zoolozy, botany, etc.. all printed in Vietnam, made their appearance in schools.

But the new equipment was still far from satisfying the needs of modern pedagogy. There were no laboratories for the schools. The teachers' training, which had been rather hasty, was inadequate from a professional point of view, and the shortcomings were sometimes serious. The schools, mushrooming as they did throughout the country, had no established traditions and the pupils, mostly children of working people just freed from illiteracy, sometimes suffered from insufficient assimilation aptitude.

The Bacly teachers continuously endeavoured to raise their professional level and to make their lessons more attractive and more accessible. A number of pupils found geometry lessons queer and unpleasant, and their teacher racked his brains to devise a more efficacious method. With pieces of wire and bamboo, he invented a series of what he called his teaching instruments. Locus and other abstract notions could thus be grasped

by those less gifted in mathematics. A physics professor found it difficult to explain the nature of electricity to sons and daughters of peasants who had never seen an electric lamp. He ingeniously assembled a magneto and an electric bell from parts of a torture instrument found in a former French military post in the neighbourhood. Barbed wire around the post was used by the geography teacher to indicate the orbit of the earth's artificial satellites. And so on...

When in order to concretize abstract notions the Bacly teachers, together with their pupils, set up a green laboratory, the fame of the school spread. This was an experimental garden for the purpose of illustrating the biology lessons of the 5th, 6th and 7th classes and initiating the pupils in scientific methods of culture and animal breeding.

Originally the garden had been created with another aim : the teachers and their pupils, anxious to contribute to production increase, had asked the local farming co-operative for a few plots of land to plant fruit-trees and grow vegetables. They were also allotted a pool for fish rearing and a small field to grow summer rice. They believed that by so doing they were carrying out the directives on gardening that every educational establishment should follow.

The provincial bureau of education told them they were mistaken, and that the school garden was primarily for educational purposes. The teachers' council of the school then instructed the biology teacher to make a plan for organizing what was indeed a green laboratory. When the plan had been completed it was presented to the pupils in a special meeting, and a movement was launched for reorganizing the school garden.

As an example, the teachers used their leisure to collect plants. Their pupils did likewise. The nursery in the vicinity gave seeds of trees with precious wood. The village pagoda supplied flower seeds and the association of Eastern medicine gave over forty species of medicinal plants. The village administrative committee, the people's organizations, the pupils' parents also made their contributions. Former pupils then working in remote provinces

also sent specimens of plants of their respective regions. The workshop of the school supplied pickaxes, shovels and sign-boards, etc.

The school garden was finally got into shape, with the following sections :

1. Section of vegetal morphology, for 5th-year students, comprising four sub-sections : roots, stems, leaves, flowers.

2. Section of vegetal systematics, for 6th-year and 7th-year students, presenting vegetals according to their classification (class, order, family, species, genus) and their evolution :

— inferior vegetals (algae, fungi, lichens.)

— superior vegetals (mosses, pteridophyta, ferns, lycopods, phanerogamia, cryptogamia, monocotyledons, dicotyledons).

3. Section of vegetals adapted to various environments : aquatic vegetals ; amphibious vegetals ; plain vegetals ; mountain vegetals ; plateau vegetals ; sand vegetals.

4. Darwinian section, engaged in selecting species and grafts.

5. Section of fruit-trees.

6. Section of industrial plants.

7. Section of food plants.

8. Section of medicinal plants.

9. Experimental rice-field.

10. Breeding section : agriculture, pisciculture, poultry-farming, rearing of pigs, rabbits and Guinea-pigs.

11. Meteorological station.

The garden of the Bacly school, where science was combined with art, was the richest and most beautiful green laboratory ever organised by a general education establishment in the D.R.V. Yet it cost just 10 **dongs**, the price of 25kg of rice, as everything had been done by the teachers and their pupils, with the help of the local population.

For the study of plants there could be no better classroom. In the green laboratory, the most difficult notions of botany soon became familiar. With their own eyes the pupils could see how one vegetal differed from another, how it took root, grew, budded, bore fruit. They eagerly engaged in grafting, selecting seeds and

other activities, and the idea gradually came to them of seeking to transform nature with their own hands. Studying was no longer a drudgery, it became a pleasure.

Thus, while the state could not yet provide the schools with the necessary equipment, on account of financial difficulties, the young teachers of Bacly did not remain inactive and just wait. Putting into practice the famous slogan "Rely chiefly on your own efforts", with the co-operation of the students and the local population, they managed to make the needed equipment. Furthermore, with their ingenuity they paved the way to a scientific and practical teaching method which had a marked mass character. Their efforts were not in vain : during the last ten years, no Bacly student of any class has failed in the end-of-year examination while those who successfully passed the graduation examination reached record figures :

School-year of 1958-1959 : 100%
— 1959-1960 : 97,6%
— 1960-1961 : 100%
— 1961-1962 : 96%

The workshop of the Bacly school

1958, the first year of the 3-year plan for the socialist transformation of the fundamental structures of the country, also brought about great changes in social and cultural life. In 1959, a campaign was launched for ideological reeducation in the ranks of teaching cadres. Its aim was to fight against old pedagogic conceptions and ensure the triumph of the socialist line in education, which was to serve the purposes of socialist construction. A general line which had been defined for education, based on the political line of the country, was a precious guide for all the teaching personnel. Teachers were made to study and discuss the aims of education. The 3rd Congress of the Vietnam Workers' Party, held in September 1960, had specifically stated that education should be carried out on a large scale, for the training of a generation of healthy, well educated young men and women armed with technical knowledge and socialist consciousness and capable of managing their country's destinies. Education must

serve the Party's line and the aims of the revolution together with production, combine theory with practice and the activities of the school with those of society. In a word, it should turn out not an intellectual aristocracy divorced from realities, looking down upon and exploiting the people, but the builders of socialism.

Until then, the schools were mainly concerned with diffusing knowledge. Success was measured by the number of students who successfully passed the examination and the main concern of every teacher was to ensure graduation for as many pupils as possible. For instance, the first-level (primary) school must lead a pupil to the second-level school and later to the third-level school, which in turn must lead to a higher education establishment. If it was a difficult task to open, in a short time, enough schools accessible to all, with all the necessary equipment, it was no less difficult to ensure that each educational establishment should turn out men and women who were not only educated but also capable of transforming society and nature.

A general line having been clearly defined, the question was now to put it into practice. Firstly, manual work was introduced into the education programme, on a par with experimental sciences and social sciences. The first efforts in this direction were made by the young teachers of Bacly.

During the school-year of 1960-1961 Bacly worked out a detailed, systematic programme for the teaching of this new discipline, taking into account the local conditions as well as the age and sex of the students. While putting an emphasis on agriculture, this programme paid due attention to the other trades in the region. It aimed at illustrating and consolidating the theoretical knowledge acquired at school and leading the students gradually to take part in production. It was greatly concerned with results because only the fruits of his work could interest the student in what he was doing. Its immediate aim was to have the students build the necessary equipment for the school while participating in social production. The long-term purpose was to turn out builders of socialism, politically conscious and technically efficient.

After the programme had been worked out, there were great difficulties to be overcome : Who could teach ? With what ? And how ?

For an example, let us see how carpentry was taught. Again an appeal was made to the students' parents who responded by giving scissors, pincers, hammers, planes and saws ; others gave springs from cast-off gramophones for making saw blades. The only wood available for practising was the boards brought by the pupils for their lessons. There were no specialist teachers, but old carpenters in the region agreed to help after discussing with the pedagogues the method to be used. The pupils who were most gifted in carpentry were chosen as coaches. In the meantime, a number of teachers endeavoured to learn the trade quickly so as to be eventually able to teach it themselves.

Many Bacly students were by now becoming good carpenters. They were capable of repairing the old furniture in their school and could even make new furniture.

It was in the same way and with the same stubbornness that the Bacly teachers managed to set up a blacksmith's shop and to turn out a team of young blacksmiths. The smithy, a gift from the provincial education bureau, was functioning quite well, with an anvil-block made from an old artillery shell unearthed during the construction of the school. From caterpillar tracks of destroyed French tanks and other pieces of scrap-iron, our young artisans manufactured picks, shovels and other tools for the school's garden and experimental rice-field. Thus, starting from nothing, the Bacly teachers, in the interests of their pupils and with their co-operation, had set up a pretty well-equipped workshop comprising a carpentry section and a blacksmith's shop. The young boys who came there for practice after the theoretical courses organized themselves into self-managed teams. They manufactured tools "ordered" by the school, satisfying their teachers' demands regarding quantity, date of delivery and technical requirements.

Besides training their pupils in carpentry and blacksmith's trade, the teachers also organized courses on housewives' work, and in the first place, sewing ; the school-girls, children of peasants, had known only the arduous work on the rice-fields.

Sewing was quite new to them. At first, there was no lady-teacher to give lessons on this subject. It was the teacher of mathematics who took upon himself the delicate task, after a period of patient apprenticeship with women-teachers in a neighbouring school. And the Bacly school girls, to the astonishment of their mothers, became acquainted with the "art of the needle and thread" formerly inaccessible to girls of poor families.

From the azolla to morning gymnastics

In the ideological, cultural and technical revolution for changing the people's way of thinking, working and living, a most important role is played by those educational establishments which are also centres of cultural, scientific and technical diffusion. Unlike schools in capitalist countries, socialist schools must develop, not within a separate world but in close contact with the life of the masses. Socialist schools must learn from the masses and do what is possible to enlighten them with culture and science.

At first, the Bacly teachers and their pupils engaged in scientific activities which had no relationship with the immediate needs of society, and this exclusively within the school compound. For example, they eagerly engaged in experimental grafts of tomatoes and potatoes which brought good results but had no practical economic value. Their work aroused the curiosity of the peasants who nevertheless remained indifferent to a method of culture which could not be applied in local production. But the effect was quite different when, in 1960, the school grew on its experimental field a Chinese variety of rice which had the highest yield in the region. The secretary of the village party cell came in person to see the experimental field, accompanied by the leading members of several local co-operative farms. The farmers enquired about the method of growing the imported rice and asked for seeds. This unexpected success brought the Bacly teachers and students nearer to the realities of life and they directed their activities towards a more practical aim : to serve the needs of the local population and above all, those of rice production. They began to study the growth of rice plants, the problem of fertilizers, the fight against insects.

The local inhabitants still praise the campaign launched by the school in 1961 to save the crop of summer rice from an invasion of caterpillars. Faced with a most severe threat to the crops, when most people were resigned to imminent losses or just kept hoping for a supply of insecticides from the government, the Bacly teachers and pupils went hunting caterpillars at night, each holding a kerosene lamp. Through several months of patient struggle and careful observation they helped the villagers save the rice crop and at the same time obtained scientific data for the study of the life and reproduction of the principal species of insects.

With the introduction of the azolla into the region, Bacly's reputation became firmly established among the local population. The azolla, a tiny aquatic plant, had been used as green fertilizer through many generations in some areas of the Red River delta. These plants which completely cover the surface of ricefields prevent the growth of weeds, limit the effects of drought and cold and protect the rice plants from a number of harmful insects. In the early summer heat, when the rice plants are earing, the azolla decomposes and provides a fertilizer, rich in nitrogen, which considerably increases the yield.

After having perfected, through many experiments, the technique of growing the azolla, the Ministry of Agriculture endeavoured to diffuse it. The main problem was to find everywhere activists determined to have the new culture adopted. In Hanam as in other localities, the population hesitated, unconvinced, for the simple reason that they had never grown the azolla before.

The Bacly teachers went to a neighbouring province to get azolla plants and let them multiply in the school's experimental field. Together with their pupils, they perused many books on scientific diffusion dealing with azolla and its culture. Following the specialists' advice and drawing from their own experience, they soon became the first experts in azolla growing in the region. The students, convinced of the usefulness of azolla became enthusiastic promoters of azolla growing, under the leadership of the local Party organization. From the green

laboratory of Bacly school, the azolla spread to many surrounding areas, tens of kilometres away. People flocked to the school to get its assistance in azolla growing.

The victory of the azolla was a great event. It brought an economical solution to one of the most difficult problems faced by agriculture in the region, that of fertilizers. At the same time, it strengthened the masses' faith in science and in the new farming techniques propagated by the agricultural services.

Since then, the Bacly teachers and pupils have been continuously expanding the scope of their scientific activities, never forgetting that they must serve the needs of agricultural production in the region. During four years, they experimented on growing a new variety of rice called **Quyet Tam** which was perfectly adapted to submerged land. **Quyet Tam** rice was finally adopted by the local co-operatives. Bacly also promoted the growing between two rice crops of the water taro and other plants to provide food for pigs. Their experiments in raising eels, and Peking ducks, and in cross-breeding local pigs with the Berkshire breed began to benefit animal breeding in the neighbourhood.

Bacly had become a section of the Vietnam Science and Technique Diffusion Association. It actively engaged in extra-curricular work, to spread the knowledge of science and technique. Many years ago, teachers and pupils organized themselves into teams of volunteer instructors to hold in each hamlet classes of complementary education for adults. They made decisive contributions to the organizing of nurseries, kindergartens and children's classes in the region. In co-operation with the local health and culture cadres, they participated enthusiastically in the hygiene and prophylaxis movement and the mass culture movement. By their example, they even succeeded in persuading young and old in the Chungly village to join them in their morning gymnastics.

The work and study groups

Little by little, through untiring efforts, the Bacly teachers succeeded in realizing an interpenetration of the school and the social environment. With their rational, realistic and, so to

speak, "regional" method of education, the school had ceased to be a decorative plant demanding from society much more than it could give in return. Yet, it was only a beginning. The teachers' aim was to make the students actively participate in the life of the country.

A Vietnamese village is made up of several hamlets each of which has a farming co-operative. On the initiative of its Party cell, the school negotiated with the leading organs of the village and the management committees of co-operatives to organize 2nd-level school children living in the same village into "work and study groups" (W.S.G.) associated with the local co-operative. Each group elected a leader and his deputies and managed its affairs by itself. Each had a sponsoring committee having as president a teacher of the school and as members the representatives of interested village organizations : Party cell, co-operative management committee, parents' association and Labour Youth group.

A W.S.G. was part of the co-operative, just like a production group. But unlike the latter, its members worked only half-time, when they did not have to study. They were assigned tasks which were suitable to their physical strength while requiring some scientific and technical knowledge. Most co-operatives got the students to grow azolla, water taro or prepare fertilizers, select seeds, look after buffaloes, while giving them a plot of land to experiment with new methods of culture. For their work the students were paid exactly on the same basis as for co-operative members. While giving them work to do the co-operatives also got experienced farmers to teach them how to plough, harrow, select young fish, etc.

The W.S.G. also required each member to effectively assist his or her parents in various activities. After consulting the parents the school decided that each student should do a number of concrete tasks.

Students from 11 to 12 years of age should :

— look after their younger brothers or sisters ; cook rice ; boil water ;

— feed pigs and poultry ;

— bathe their younger brothers or sisters and wash their clothes ;
— sweep the floor and the courtyard ;
— plant three fruit-trees a year ;
— raise one hen weighing 2 kg (a year) ; and
— grow 50 **Zongrieng** plants (a kind of plant with edible roots) or 1 square metre of water convolvulus or 50 turnip-cabbages.

Students from 13 to 14 years of age should :

— obtain 100 to 150 points (10 to 15 work-days) a year in co-operative work ;
— collect five to seven hundred kilograms of manure (a year) ;
— raise one rabit (a year) ;
— grow 100 **Zongrieng** plants ; and
— grow 100 cabbages or turnip-cabbages.

By the end of the school-year of 1963-1964, the W.S.G.'s had on their record an honourable account :

— 39,500 work-points (equivalent to 3,950 work-days) ;
— 898,100 **Zongrieng** plants ;
— 158,000 water-taro plants ;
— 942 square metres of vegetables ;
— 136 tons of manure ;
— 8,600 fruit-trees and shade trees ;
— 55 rabbits ; and
— 380 cocks and hens.

The W.S.G. paid particular attention to its members' personal studies which took place late in the day, from 6-7 to 9-10 p.m. It also attended to the members' recreation, encouraging them to engage in sports and healthy, educational games, and discouraging those which were dangerous and harmful. It looked after their ideological education, by arranging for them to participate in political studies and works of public interest.

Thanks to the elder members' efforts and solicitude, the W.S.G.s now numbering 26 have effectively contributed to the extra-curricular education of their members and to production increase and progress of the village. As the W.S.G. is quite a new idea, its principles and working methods have not yet taken definite shape. Nevertheless, it may already be said that for

children from eleven to fourteen years, the W.S.G. seems to be the best form of organization to continue and complete the school studies.

Moral and ideological education

In all times, in all countries, to study is, for a peasant, to seek an eventual escape from the hardships of farm work, from wallowing in the mud, harvesting under a scorching sun ; to study is to make it possible for the peasant to live one day in a well-lighted city, to work in a factory or office. A kind of selection in the wrong direction takes from the countryside the cream of its youth. The danger is greater in a poor country whose agriculture must be given a strong impulse to become the basis for industrial development. With young students in rural schools, the question is not merely to teach them new methods of farming but also to keep them from leaving their villages. The problem is all the more acute as the organization of co-operatives requires the use of new techniques, a complex management and consequently, educated cadres who love their work. Education must above all inculcate and develop patriotism, love of work, of socialism ; it must develop this love of the soil which strongly binds the young students to their native land.

For the history teacher at Bacly, the first task is to record the glorious past of the district and of the province and teach it to his pupils, so that they are proud of the traditions of struggle of their forefathers who selflessly fought to defend their native land against the invaders. All the students of Bacly know the story of the thirty-two old men in the Ducban hamlet who, during the resistance against the French colonialists, chose to be shot by the enemy rather than reveal the underground cache where the leading cadres were hiding. The students remember the least details in the stories of the lives of two natives of Hanam province — Army hero Tran Van Chuong, who was particularly feared by the enemy then occupying the region, and the famous writer Nam Cao who was killed in an enemy ambush when on a mission.

The teacher of literature also does his best to make the pupils love their native villages. The local folk-lore being extremely rich, he frequently uses it in his lessons and encourages his pupils to narrate tales and legends of the region. He asks them to record the tales circulated among the local population, a task which they love to do. In the "Traditions Room" of the school — which is an exhibition room — is a carefully written manuscript, with the following foreword :

Dear readers,

During our quarterly review of literary texts, we have recorded local tales and legends with a view to enriching the collection of popular literature for our class. We have collected 64 of them, 12 of which have been published in our wall newspaper "The Cricket". We now present the remaining 52 tales and legends. We beg you to excuse us for the misspellings that you may find herein.

Bacly January 1st, 1962.

The teacher of biology also displays much initiative to the same end. During the lessons on fish, he gets some of the pupils to bring their parents' fishing lines and explain their use to the whole class. When giving lessons on birds, he has the principal species in the region brought into the classroom. He once organized in the school compound a very successful exhibition of birds which many people came to see. His pupils were deeply interested and little by litte, they discovered the rich fauna and flora in their region, and the traditional means and methods used for exploiting them.

To acquaint the students with all the aspects of life in the region is regarded by the school as one of its main tasks. To this end, it organizes lectures by elite workers in various fields, visits to historical sites which are indeed outdoor history lessons, visits to the best organized agricultural co-operatives whose rice fields have recorded the highest yields, etc... But the students are shown not only the positive side of things. To sharpen their critical minds and make them look straight at facts, their teachers do not hesitate to tell them about the many difficulties faced by the country in its march forward.

To "regionalize" education is merely to apply in a concrete way one of the most fundamental principles of education in the D.R.V., which consists in making the students deeply penetrate into the political and social life of the country. Political and educational training is the basis of moral education. Love of the soil is significant only when it is based on profound patriotism which, in turn, is linked with love of socialism. The liberation struggle of our countrymen in the South and the struggle of our entire people for reunification provide an extremely rich subject for education.

At Bacly and other schools in the D.R.V., political and ideological education is given much attention. The history of Vietnam, especially the history of the struggles for independence, of the acute class struggle during the last few years leading to deep economic and social transformation, is taught with the utmost care. The students study particularly well the lives and examples of those who fought for the Revolution, of the heroes of Dien Bien Phu and of the South Vietnam battles. Great events in the country are studied, commented upon, discussed in many articles of the wall newspapers.

To cite only one example, let us evoke the image of the hero Nguyen Van Troi. This 24-year-old worker was shot on October 15, 1964 at Saigon by the U.S. imperialists and their lackeys. Facing the firing squad, he snatched off the bandage covering his eyes and looked the enemy in the face while he castigated them. In all the schools of North Vietnam poems and writings on the young hero have been taught, recited ; all wall newspapers are full of articles written to honour him. Groups of teachers, and pupils have made Nguyen Van Troi an honorary member, pledging to do the additional work required from the increased membership. The whole political and social life of the country is thus directly reflected in the teaching and other activities at the school. For ten years now, our country has been victim of a ferocious aggression by the U.S. imperialists. That is why Bacly, like other schools, is giving proper military training to its students.

The parents' role

At Bacly as in other 2nd and 3rd-level schools in the D.R.V., each class is placed under a principal teacher responsible for all its intra- and extra-curricular activities. Looking after his pupils' ideological, moral and civic education as well as general education, he has to maintain close relations with their parents to be informed of the children's behaviour and the study conditions in their homes. The pupils' parents are regularly invited to attend the half-yearly meetings with the teachers, to be informed of their children's studies and to be advised on what should be done at home to enable the children to obtain better results.

The first councils of Bacly pupils' parents were not very effective. They had a purely symbolic value as the members were old men respected in the region but knowing little about the new problems faced by education. The parents' council has been reorganized and is now made up of leading members of various popular organizations. These representatives better understand the requirements of the new life and are more capable in mass activities. With the support of their own organizations, they have helped the school create a group of pupils' parents in each agricultural co-operative. Through the co-operation between the teachers' council and the parents' council and parents' groups, Bacly has successfully organized combined actions by the school and the families.

Every month, the parents' group in each co-operative meets with the work and study group sponsoring committee. The teacher in charge of the W.S.G. presents a detailed report on each pupil living in the village, covering all aspects of the child's activities. The parents tell the teacher how their children participate in their respective families' work, and commend the best pupils of the month.

Each member of the parents' group pledges to co-operate closely with the school and the W.S.G. in controlling his children's work and studies.

Good seeds

Nearly 400 pupils have graduated from Bacly since the founding of the school. Tens of them have become physicians, agriculturists, engineers, secondary school teachers. Many are continuing their studies abroad. Others are working in workshops and on construction sites as machinists or building workers. But as general education develops, more and more pupils who have finished the 7th or even the 10th class are staying in the countryside to cultivate the land.

As in other parts of the country, the co-operative members in the Hanam region now constitute a social class with a solid basis, more progressive than the old peasantry. In the midst of older peasants freed from feudal and colonial exploitation, freed from illiteracy and now following the socialist road, but not yet completely liberated from the bondage of the past, former Bacly pupils now members of agricultural co-operatives have become a stimulating factor to achieve the transformation of their native land.

For instance, the former pupils of Bacly living in Noi Roi village have played an active role in the application of new farming methods by the local co-operative. In 1963 on an experimental field of one **sao** (360 sq.m.) they applied a new irrigation method which consisted in bringing in or evacuating an adequate volume of water at each phase of the growth of the rice-plants, so as to increase their yield. In 1964, 60% of the seeds sown by the co-operative had been selected by former Bacly pupils. These new-type peasants experimented in the growing of **Quyet Tam**, the new variety of rice, on two separate fields which were differently irrigated, and their success led to the adoption of the new rice by their village and other villages in the district. Furthermore, they helped their co-operative reorganize its defective bookkeeping which had caused many difficulties to the management.

The role played by those enthusiastic youth in the cultural and social life of the village should also be mentioned. They have helped the co-operative found a club where, together with other Labour Youth members, they give artistic performances and

magic lantern shows. They have reorganized the co-operative's book collection and endeavoured to propagate scientific and technical books. They engage in an obstinate struggle against superstitions. One of them, through patient persuasion, has made his father give up his profession of "master of cult" (a kind of sorcerer) to become an active member of the co-operative. Closely united, they give the other local youth a good example of comradeship, friendship and team spirit. While working with their hands they don't neglect their education : organizing themselves into a study group, they regularly go back to their former school to attend complementary courses organized for them on Thursday afternoons.

Among the former Bacly pupils now agricultural co-operative members, let us cite the example of Cao Xuan Thang. It is on his initiative that the local co-operative has followed a new direction in production, which makes it increasingly prosperous. He has introduced a new-model wheelbarrow easy to handle on the narrowest country lanes, which now replaces the traditional means of transportation by bamboo baskets and carrying-pole. He has succeeded in bringing about the adoption by the village of the azolla and of his new fish-breeding methods which are responsible for higher yields in local pisciculture. He became a Party member during his military service and after his return to civilian life was elected vice-chairman of the local agricultural co-operative : his prestige is growing rapidly in the region.

The Bacly teachers say that their pupils are seeds of the school sown on the native soil. And like good peasants, they take good care of the seeds. They advise their former pupils in their work, in their family and social life. The teachers organize in their interest an exchange of experiences with the school, and complementary courses in mathematics, physics, chemistry, biology and literature, constantly looking after the organization of their personal studies to raise their cultural standards. Doing this, the teachers also obtain additional materials for their courses and for improving their teaching methods. Thus, they have introduced into the school curriculum, elements of bookkeeping necessary

for the management of agricultural co-operatives. No doubt, the seeds that the Bacly teachers have sown are for them precious reward.

Another reward of no less value is the "Learn from Bacly" emulation movement which is spreading rapidly in all the educational establishments of the country. Visitors are coming to Bacly in ever larger numbers, and conferences have been held to discuss lessons drawn from the Bacly experiment. The Education Ministry which has closely followed and directed this experiment has systematized the teachings of Bacly so that they can be applied by all the schools in the country.

Some conclusions

Bacly is a 2nd-level (junior) secondary school for boys and girls from 11-12 to 14-15 years of age. The pupils are entering the first phase of adolescence, having acquired in the primary school a minimum of knowledge and education. What should these young peasants be taught, in the conditions of a country like the D.R.V. which is poor but is developing at a rapid pace in the building of socialism ? And how ?

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But the first question that the teachers had to solve was : with what to teach ? From Bacly's experience, this first lesson can be drawn : in a poor country, the teachers must be animated with a strong determination to rely chiefly on themselves to find the necessary material and educational means.

For teachers and pupils to rely on themselves means to do the utmost, to use all their creative power to overcome all obstacles. It also means to seek the support of the local mass organizations, to make them directly concerned with the problems of education, and ask them to contribute to the construction of the school and to its educational activities. To follow the mass line is the second lesson to be drawn.

But the most important thing the Bacly teachers had got, especially after the country stepped onto the road of socialism, was a general line on education to guide their efforts.

The clearly stated objective was to achieve integral — physical, intellectual, moral, aesthetic — education, defined not in an abstract but in a concrete manner, in keeping with the requirements of the socialist revolution. Not abstract socialism, but socialism in Vietnam's conditions. The objective is to turn out socialist people, workers armed with socialist consciousness, and the science and technique necessary for transforming the old society and building the new.

Bacly, a rural school, has been particularly assigned the task of training socialist peasants, that is peasants participating in co-operatives, animated with the determination to build collective, modern agriculture, to contribute to the general economic and cultural development of the country, to the reunification of Vietnam. The foremost task for the school is to ensure for the pupils a solid political and ideological education.

Education in patriotism and in the love of socialism is closely linked with education in the love of productive work. To make the pupils participate in local production and become an organic part of the labour force of co-operatives, is the objective which Bacly has gradually sought to attain. The countryside of North Vietnam has been and is undergoing continuous revolutionary transformation: anti-imperialist struggle, anti-feudal struggle, agricultural co-operation, improvement of farming technique and management of co-operatives, rapid cultural development. Education must be completely renovated to satisfy the needs of the new life and turn out young men and women devoted to socialism who will become a moving force of the revolution. The alternative would be to cling to bourgeois and feudal conceptions which are outdated and have become an obstacle to social evolution.

Bacly has evolved a method of education based on a socialist conception of the school, of its role and of educational principles. Political and ideological education, on the one hand, and active participation in production, on the other hand, constitute the two

main pillars. The school thus becomes a production centre and especially a technical and cultural centre for the neighbouring villages.

Obviously, such a school could not exist without a new breed of teachers. The Bacly teachers' spirit is a revolutionary spirit: ardent patriotism, love of socialism and love of work. Every important event in the country and the world finds prompt reaction at the school. Teachers and pupils are greatly concerned with the struggle to build socialism in the North of our country and the heroic fighting of our countrymen in the South. Great indeed are the devotion and abnegation required from the Bacly teachers for the building of their school.

Bacly has grown up under the sustained and concrete leadership of a Marxist-Leninist party which has guided the teachers along a revolutionary road. The Party, with its organizations in the educational services, in the school itself, and in local and regional organizations, has constantly and firmly played a leading role.

There have been imitations of Bacly in the aspect of formal pedagogy, but without a correct general line, without a revolutionary spirit, these attempts have failed. Closely united by a revolutionary ideal, the Bacly teachers have been advancing courageously on a difficult but glorious road.

Documents

OUR WORK-STUDY GROUP

We give below the full text of a report by Nguyen Thi Ngoan, a sixth-former at Bac Ly, on the activities of her work-study group (W.S.G.).

Our Vanxa W.S.G. was formed 5 months ago. It is composed of 20 school-children, 10 of the 5th form, 7 of the 6th and 3 of the 7th, most of them "pioneers". Under the auspices of the Leading Committee there is a 3-member Bureau — one in charge of over-all activities, a first deputy responsible for technical matters and a second for organisational questions.

We meet every other Saturday evening :

— to discuss our past work and plan our next activities ;

— to discuss technical problems, keep ourselves informed of the situation in our village's co-operative and recall the history of our region ; and

— to control the activities of each member and those of the Bureau.

Since the formation of our W.S.G., we have made rapid progress.

From the moral point of view, we have learnt to lend a helping hand to the co-op, thus acquiring the habits of socialist labour. Thus, when it starts raining and the ripe rice threatens to germinate, we help the co-op bring in the harvest quickly.

We have also learnt to apply techniques learnt at school, and helped the co-op practise new farming methods. So when we reach work age we shall no longer work according to the old techniques.

We have also practised mutual assistance among ourselves. For instance, Tu who is a dab at mathematics, has helped Tho, to rise from "bad" to "pretty good".

We have learnt to know our region thoroughly and to love it, thus closely linking our lives with that of the co-op. Each time our region commemorates a historic date, cadres come and tell us about the region's revolutionary history. Thus on February 3rd, anniversary of the founding of the Party, Mr. Hung, Secretary of the village Party Committee, visited us and told us how heroically many of our elders had fought, and some had died so that we may now enjoy freedom. We promised to work harder still for the building of our village.

In the technical field, we have learnt many things from the co-op members, and associating the notions learnt at school with these acquisitions, we have practised soil liming, rice sowing following a new technique, and azolla raising, and drawn a map on the acidity of the soil in our co-op fields.

At our request, the co-op put at our disposal 3 **sao** of land (one **sao** = 360sq metres) which we turned into 3 experimental plots : in the first plot, we put 300 kilos of manure, in the second, 200 kilos of manure and 100 kilos of compost, and in the 3rd, 50 kilos of lime, 100 kilos of phosphates and 100 kilos of manure, and we compared the yields of these plots. In this, we were assisted by adults, from the beginning until the harvest. Mrs. Mat taught us to build little dykes bordering our fields and to hoe the soil. Mr. Hung and Mr. Xuyen taught us ploughing, and others to transplant rice in rows of 15 by 10 centimetres. In this way everybody helped us in growing our rice.

In our villages, apart from agriculture, there are other occupations : fishing and hammock-making. We asked Mr. Lang to teach us how to obtain fry. A one-**sao** pond was given to us to rear fish. This pond had just been dug ; its water was clear and acid. The co-op could not raise fish in it. We tried new techniques. Following Mr. Lang's advice we emptied the pond, filled up the holes in which snakes and crabs might hide, and caught all predatory fish. We then levelled the bottom of the pond and exposed it to the sun for several days. Predatory fish hiding in the mud had to come to surface and were caught. We

measured the pH of the mud: 5-6... We put in enough lime to bring the pH to 7. Then we let water in to enable the fish to spawn.

Hammock-making is a traditional trade in our region. We have succeeded in learning all its secrets. As for the making of **Ziu** (big bamboo implements used to catch small fish in deep rice-fields, **Ed.**) we shall wait until we grow strong enough to make them.

To contribute to production, each of us has a little plan of his or her own for raising one rabbit and two hens, and planting salad, turnip-cabbages and taros, etc. All told, our W.S.G. has 15 rabbits, 32 cocks and hens, 1,075 plants of salad, 182 turnip-cabbages 1,700 taros and 5 beds of vegetables on a patch which belongs to us. Some of us are trying to raise rabbits in the open.

When the time comes for **Ziu** fishing, while our parents are busy fishing in deep ricefields we attend to all kinds of household work : tending the buffaloes, preparing the pigs' feed, etc.

We also control each other's studies. From 7 to 9 p.m. we do our preps and learn our lessons, and the next hour is for reading stories. Every morning, we rise early to review our lessons before going to school. Each class is divided into groups of 3, each member working individually but with the help and under the control of the 2 others. Those who lack text-books can borrow them from the others. Anybody who experiences difficulties is given help. Tho's family does not have enough man-power. This used to affect his school attendance. So, we offered to help his family grow potatoes and they got 50 points for it (the co-ops grant a number of points for each work done, and the crops are distributed in proportion to the number of points obtained by each household. **Ed.**) Tho's family is very grateful for it, and Tho is now able to attend class and meetings regularly.

The best among us pupils endeavour to study more than required by our teachers ; thus, they try to solve difficult problems and then show the results to our teachers.

Thanks to those efforts, at the first half-year tests, for none of us the average mark was below 4 (the best mark is 5, **Ed.**). Tu, The and Tinh received congratulations from the school, being

ranked "good" in all respects. Three of our comrades were designated to take part in the all-district mathematics competition, and five in the literary composition contest.

We have taken part in many social activities, in particular in the campaign for the improved management of co-operatives right at its start. We scoop water and manure and tend the 3 **sao** of ricefields of the infant chool. Every Thursday, back from work, we clean up the village's lanes and public places, according to the watchword : "Clean village, well-manured fields" (rubbish is collected for making compost, **Ed.**). We also repair lanes, cut grass for the co-op's buffaloes and make coverings to protect them from the cold of winter.

We have a well defined time-table : in the morning, on getting up, we help our families prepare rice ; then we review our lessons and go to school ; after class, we return home and help prepare lunch ; after lunch, we proceed with the work assigned to each of us by the W.S.G. or help in household chores ; our work finished, we play football or other games. Some of our comrades are members of the school's volley-ball team.

Thanks to our W.S.G. we have come to understand, help and love one another, we understand the life and work of our parents, who are peasants, we love and respect their labour and feel all the more attached to our region.

I love the Communal House of our village with its wonderful sculptures bequeathed by the past generations. This House has been classified as a historic monument. We keep it always clean and its yard is our favourite playground. I am particularly fond of fry raising and pisciculture, two trades practised for a long time now in our village. I very much like hammock-making which has long existed in our village. We often sing :

"For a fresh bathe, we must go upstream and seek faraway springs,

But for a breath of fresh air, we only need to swing on a hammock right at home."

How I love the great banyan tree standing at the village's entrance... Our W.S.G. promises to work better and better to make our village ever more beautiful.

THE HANOI POLYTECHNIC

NGUYEN KHAC VIEN

On October 15, 1956, the Hanoi Polytechnic opened its door to 875 students. In October 1964, the College took in 5,600 daytime students, gave evening and correspondence courses to 1,800 others, with a teaching staff totalling more than 700. Between these two dates lies a long history.

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Accelerated growth

In February 1956, they numbered only 15, administrative personnel and cooks included. To them the government of the Democratic Republic of Vietnam and the Vietnam Workers' Party had entrusted the task of founding the Hanoi Polytechnic College. To train engineers, those sorcerers of modern times who make trains roll and planes fly, and tap hitherto unexploited riches from the depths of the soil, what a magnificent work !

But with whom, with what, and how was it to be done ?

Fifteen years of war (1939-1954) had left the country almost completely devastated and sucked dry. With the destruction of war, the few which remained of its industrial establishments had practically stopped functioning (1). The colonialists had taken care to take away all essential pieces of machinery and repatriate all French technicians. Then they left with a grin : "You have got it, your independence, but this won't set the machines running !". The challenge must be met : not only the few remaining machines must be set going again but a new industry had to be created and engineers trained.

Who was to do it ? They were fifteen, of whom four only had completed their higher education and none had ever attended an engineering school. In the colonial days, technique was strictly kept secret. If a Vietnamese youth presented himself at the University of Indochina, eager to learn science and technique, they would tell him : "Good, if you love science and technique, take up medicine." (Those who loved literature were advised to study law).

With what? They were allotted the buildings of the old **"Cité universitaire"**. But don't let yourselves be impressed by those high-sounding words ! This "city" had been in reality a mere boarding house, because the University which the colonial regime had set up for the three countries of Indochina had counted only 600 students. About half of this number were housed in the "city", in four buildings erected on a waste ground on the fringe of the town. Moreover, this "city" did not keep its academic destination for long. When the war came, it was transformed into barracks. One can easily imagine in what state the soldiers of the French Expeditionary Corps left the buildings when they pulled out. The founders of the Hanoi Polytechnic College found the premises strewn with empty bottles, barbed wire, instruments of torture, in short everything except what to teach science and technique with. All around was a girdle of swamps swarming with leeches and snakes where the townsfolk never ventured.

How to train engineers ? The fifteen pioneers did not know exactly, but long educated by the Workers' Party they knew that

(1) Modern industry accounted for 1.5% of total output in 1954-1955 ; North Vietnam's electricity output in that year was 55 million Kwh **(Building of an Independent National Economy in the D.R.V. — Foreign Languages Publishing House, Hanoi).**

one should never "wait for the berries to fall straight into one's mouth" (1) but should rely first of all on one's own efforts. To jump into the water has always been the best way to learn how to swim. They had all taken part in the war without, at the beginning, knowing how to handle guns and command whole divisions. None had graduated from Saint Cyr or West Point, yet they had done quite well and won at Dien Bien Phu. The same compass which had helped them find their way and win battles would show them how to build a school for engineers. Thus they set out, practically without any means but confident in the leadership of their Party. They knew that they would have to work hard and to grope their way but also that they would succeed.

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At first they did the jobs of Robinson Crusoes, washing the barracks, repairing the alleys, and filling up the swamps. The old buildings did not provide enough space for holding classes and housing students and teaching staff. Pending the building of brick and concrete houses, wood and especially bamboo were largely used. Indeed, for class-rooms and living quarters, there was no need of palaces. This building work went on for years because each year thousands of new students and many teachers came, who must be housed and fed. More roads were built, more swamps filled and soon, beside the thatched houses emerged brick-and-tile buildings, where not long before there were only frogs and duck weeds. Teachers and students planned their projects themselves, and with their own hands built the access roads and a stadium and at the same time planted sweet potatoes, vegetables and banana trees which added extra food to their daily meals.

The school has been and remains an immense construction site where teachers and students daily learn the trade of builders, handling picks and shovels as well as compasses and slide rules, beside architects and workers. The methods were rapidly

(1) Vietnamese proverb.

modernized as time went by. From the thatched huts with wattle-and-daub walls set in rows like match boxes close to the entrance gates to the stately multi-storeyed buildings with large glazed windows and provided with the most up-to-date installations constructed with Soviet aid, the progress is visible just as the contrast is striking. Here they did not wait for the completion of buildings to begin teaching ; instead classes took place while construction was underway.

Neither did they wait until the equipment bought from abroad had all come too undertake tests and experiments. In a country in full construction the needs in machines and goods are immense and foreign currency is rare. What is to be done if the machines and instruments could not be bought or are late in coming ? Teachers and students made a search in the city, visited construction sites and factories and even store houses of ministries. They brought back to the school old machines, spare parts and discarded apparatuses which after repair and mending were used as teaching materials. The French Expeditionary Corps unwittingly rendered great services to the Polytechnic College : in its defeat it had let fall into the hands of the Vietnam People's Army large quantities of materials and apparatuses, mostly made in the United States, and the V.P.A. later offered them to the College.

Gradually, workshops were erected where teachers and students made themselves teaching equipment. The national industry step by step turned out machines or parts which previously had to be imported. Take for example the equipment of the laboratories of radio-electricity, which includes the most delicate and complex instruments. The breakdown was as follows for 1964 :

57% was foreign made ;
20% had been bought from the national industry ;
23% had been made by the school itself.

It would take a great number of pages to record the feats of the teachers and students of the Polytechnic College in their efforts to make or acquire laboratory equipment. At times, teachers offered to work for whole weeks as demonstrators at

exhibitions organized by other socialist countries in Hanoi in order to study there the functioning of machines or instruments which were lacking at the College.

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One needs more buildings and equipment to hold classes and initiate the students in the secrets of science and technique. Where to find learned academicians and experienced professors — the pride of advanced countries ? Should one invite them from abroad ? But then teaching would be done in a foreign language and would be accessible only to a small minority. Moreover, this would prevent it from having a national character. An intangible principle must be adopted : education at all degrees must be given in the national language by nationals of the country. Soviet specialists have been invited. They advise Vietnamese teachers, help them improve their knowledge and draw up curricula but they do not give lectures to the students, nor are they in charge of any examination.

The programme for the first year (1956-1957) was essentially composed of courses on the basic sciences : mathematics, physics, chemistry and mechanical drawing. The teaching staff was recruited from among the first batch of graduates of the Teachers' Training College (1). Experienced technicians from factories came to initiate the students in mechanical drawing.

In the first year, there were only four engineers back from abroad to help the young graduates of the Teachers' College in preparing their teaching programmes while they themselves prepared lessons in technology for the following year. Reinforcements came during the year, from the Soviet Union and China. There came back a certain number of graduates of various engineering schools. They shared among themselves the different courses of lectures, some taking charge of several courses. Most of them had just got their degrees and had as yet no practical

(1) With about the standards of a B.Sc.

experience. Moreover they had studied in a foreign language, and had therefore to make tremendous efforts to compile lessons in their mother tongue. In compiling such materials, they have contributed together with teachers of other schools, technicians and researchers to creating a technical and scientific terminology in Vietnamese which has become quite familiar in the country at present.

At the beginning of the school-year 1957-1958 the College numbered 1,455 students including 984 boarders, and 108 teachers of whom 50 were receiving advice and assistance from 17 Soviet specialists. Altogether 13 courses were taught and the College was provided with 21 lecture halls and 17 laboratory rooms. However, the study programmes were not yet definite. They were inspired from Soviet curricula but there had to be a great deal of groping before it was possible to adapt them to the realities and possibilities of the country.

By the end of 1959, the students of the first batch had made three years of study. They already possessed fundamental knowledge about certain techniques but the teaching staff were not fully prepared to take the classes to a higher level.

What is more, the national industry which was building up rapidly urgently needed technical cadres (for example the Nam Dinh Textile Combinat which employed nearly 10,000 workers had no engineer at the time). It was therefore decided to send students who had passed their examinations to factories and construction sites. Whether diplomas would be conferred on them or not depended on the results obtained after two years of practical work in production.

100 students of this first batch were retained at the school to become teachers. 100 others were sent to the Soviet Union to attend perfection courses and serve later as teachers in their turn. The College then counted nearly 3,000 students and 150 teachers assisted by 17 Soviet specialists. The close of 1959 marked a turning point in the direction and organization of studies. The managing board of the school and the teachers, drawing lessons from three years' experience and inspired by Soviet and Chinese programmes came to define more concretely the goals and methods of education as follows :

The school must accomplish three principal tasks : to give a good education, to make the students take part in production work and to promote scientific and technical research. Of those three tasks, education is the foremost.

— It is necessary to work out a stable programme of study and endeavour to fulfil it just as a factory has to achieve the objectives of its plan. The programme of study was thus fixed at four years, with 3,000 hours of study.

In 1959, a department for scientific and technical research and another for production work were set up.

At the end of 1960, the Polytechnic College already assumed the dimensions of a big school with 4,000 students and 370 teaching cadres. A fourth year of study was opened and an evening course began to function with 330 students. In addition, the College helped the Hanoi Engineering Plant to open evening courses for its own personnel and the population in the town district where it was located, with 700 students ; 4,000 persons (students, teachers, other personnel and their families) received accommodation in the College. In the course of that year, the students and personnel, including the teachers, devoted 30,000 work-days to embellishing the school and planting 6,600 trees.

In co-operation with other organs, the teachers of the College compiled a glossary of technical and scientific terms of 50,000 words, and the national language was used in teaching. Scientific and technical research effected in the laboratories of the College began to yield some results : thermic treatment of anthracite, making of low-frequency copper oxide rectifiers. Teachers and students took part in the study of certain projects, the equipping of certain factories and the tropicalization of electrical appliances.

By 1961, a stage had been completed : everybody was now convinced that it was fully possible to train engineers in the country itself with Vietnamese teachers and with the national language as teaching medium. Of course the studies have not yet attained a high level but the students graduated from the College proved capable of fulfilling their tasks in various factories and construction sites in the country.

In 1962, it was thought that the College could from now on do without Soviet specialists ; however cadres continued to be sent to the Soviet Union for complementary training, so as to become more and more competent teachers. That year, the College numbered 4,832 day-time students, 934 in the evening courses and 412 teachers. It now possessed 9,400 square metres of floor space for class rooms and another 16,000 square metres for housing. It was now housing 5,700 people. A great deal of equipment had come to strengthen the laboratories and workshops which were now able to turn out machine tools, electric motors, and apparatuses used in teaching. The sales of products and equipment made by the laboratories and workshops provided appreciable financial returns which allowed the College to buy more and more improved equipment. The College took part in the building of roads, bridges, residential quarters, hydraulic works, etc. and conducted researches for the production of tractors, the building of the Hanoi river port and small-sized steel foundries. The scientific and technical research now dealt with new topics : improvement of the quality of the tin processed at Tinh Tuc, study of magnetic ferrites, designing of a washing machine for coal extracted at the Mao Khe mine, working out new methods of drilling for the Deo Nai coal mine, etc. The economy achieved as a result of the use of the new apparatuses and methods was estimated at two million **dongs** (1). The College helped in numerous regional projects, for example it designed a cassava drier, farm implements and various other tools for the State farms.

By 1961, a new period had begun : the point now was to strive to raise gradually the standard of the studies in order to attain international norms. A five-year programme was thus introduced comprising 3,900 hours of study distributed as follows :

22-25% for fundamental theoretical studies (mathematics, physics, chemistry, theoretical mechanics, resistance of materials) ;

(1) One **dong** is equivalent to 1.5 French Francs ; the official price of a kilo of rice is 0.4 **dong**.

28-32% for basic technology;
20-22% for special techniques;
9% for foreign languages;
12% for political studies;
3% for physical training.

The student took 30-32 weeks of probation in factories; four others were devoted to farm work. Each student must present at his graduation exams a specific project: this marked the technical maturity of the College which was now capable of supplying the necessary conditions for the elaboration by each student of a project of technical study. Conferences dealing with specialized techniques were held periodically by teachers and students of each branch. It was decided to form a great number of professors and researchers of high level, and to this end, cadres were sent to the Soviet Union where they would work towards a doctor's degree. There are one hundred of them at present. The College has published 687 roneo-typed courses of lectures and 70 text-books, all of them in the national language. The library of the College has been considerably enlarged and now has 170,000 books. Scientific and technical researches cover numerous fields. The value of the products of the mechanical and radio engineering workshops of the College amounts to half a million **dongs**. The number of day-time students and those of the evening and correspondence courses is nearly 7,000.

By 1963, the Polytechnic College had, so to speak, taken definite shape, at least in size and in the number of students. However, the construction of new buildings continues and will only be completed towards the end of 1965. The fundamental problem on which the College Party organization has been concentrating its efforts remains that of *"the quality of the teaching which in spite of continuous progress, still remains below the standard required by socialist production"*.

From its foundation to the summer of 1964, the Polytechnic College supplied nearly 4,000 graduates to the construction sites and factories and various branches and services in the country.

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Those who saw in 1956 the old *"Cité Universitaire"* of Hanoi, its tumbledown buildings and the swamps that surrounded it, will be greatly astonished if they now enter the Polytechnic College of Hanoi. On an area of 47 hectares, they will find a real town with more than 8,000 inhabitants, tree-lined alleys, multi-storeyed houses and sports-grounds. If they climb on the roofs of the new buildings, they will see all around new residential quarters built on the former swamps: the Reunification Park with its lake, flower-beds and shady alleys, brand-new schools and dwelling quarters. The sports grounds, and the classrooms and laboratories are crowded with active and zealous youth. Young men in white or blue shirts and khakhi trousers with beardless faces, young girls dressed in white jackets and black trousers; all breathe youthful ardour. A stranger could hardly distinguish in this animated crowd the students from their teachers because their difference in age is only a few years. The profession of an engineer is so new in the country that those who were students only yesterday are teachers today. In its training programme the Hanoi Polytechnic College has encountered all kinds of difficulties inherent in youth but it has also benefited from the mettle which is proper to youth. The people are young, but so is the regime.

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At present the school comprises 6 faculties:
— Mechanics-Metallurgy,
— Electricity and Radio,
— Building, Civil Engineering, Hydraulics,
— Mining-Geology,
— Techno-chemistry, and
— Evening and correspondence courses, with 45 branches and 250 specialities.

Courses for economic engineers include mechanics, metallurgy, building, electricity, chemical industry.

Evening and correspondence courses aim at training cadres for the following specialities: production and distribution of

electricity, radio, mechanical engineering, motor-vehicles and tractors, metallurgy, civil engineering, chemical engineering, economic engineering.

The school is led by a director assisted by several deputy-directors and the following departments and services :

— **Education department :** helps the directorate to manage teaching and study, libraries and publication.

— **Staff and cadres department :** takes up the administration of the staff and students.

— **Finance department**

— **Equipment and supplies department**

— **Health department**

— **Administrative department**

— **Ideological education and propaganda department**

Besides, there is a capital construction department which directs and controls chiefly the construction of new buildings. Numerous problems are confronting the leaders :

— organisation of education and study ;

— co-ordination between education and productive work ;

— co-ordination between education and research ;

— ideological education of students and cadres ; management of these students and cadres in all fields : intellectual, moral and physical ;

— management of the boarders and the material basis of the school (equipment).

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They have matured with the growth of their school.

It is quite difficult to tell who among those teaching or administrative cadres have contributed most to this rapid growth of the school. All of them have for years now spent many sleepless nights, Sundays and holidays studying documents, learning foreign languages, visiting factories and construction sites to seek materials for their lectures, improve their teaching methods, help the students understand the most difficult parts of the lessons, and write their graduation theses. What is most important is that it is less a question of individual progress,

peculiar to some picked teachers, than a collective effort that stimulates every team to surpass itself so as to be able to meet the requirements.

Indeed, as the teaching staff increases in number, each subject is taught by a body of teachers who share the work among themselves and help each other in improving their knowledge. Each of them can thus center his efforts during a given period on a definite question the choice of which is made with the advice and help of all teachers of the same subject. If one of them has to stay away from school for some months or even a longer period to work at a construction site or in a factory, or to improve his knowledge abroad, the other members of the collective immediately take over his task.

Let us follow the progress of the civil engineering branch. Set up at the end of 1958, its teaching staff was made up of 4 graduates from Chinese railway schools. In the following years other graduates from Soviet or Chinese schools and also from the Polytechnic College itself joined the collective, bringing the total number of teachers to 22, among them a young woman graduate from a middle technical school, who did experimentation work. Thus, there are now in the collective 21 university graduates : 8 came from the Teachers' College and 13 returned from abroad. The average age is 26.

The teaching deals mainly with the study and building of bridges, tunnels, roads and railways and has to train engineers chiefly for these branches and accessorily for hydraulics and geology.

The collective has to :

— teach theoretical knowledge at school,

— assist students doing probation work at construction sites,

— assist students writing their graduation theses,

— carry out researches and experiments on certain scientific and technical subjects, and

— participate in certain works in the country, which enables the teaching staff on the one hand to enrich their theoretical teaching, and on the other to bring the school's contribution to national construction.

Those are immense tasks for freshly-graduated young men and women, with little theoretical knowledge and no practical experiences. But a common feeling strengthens them right from the beginning : they all came from poor families and had clearly realized that without the Revolution, they could never have become college teachers. They decided to devote themselves body and soul to the tasks entrusted to them by the Party. They set for themselves the following main aims : quickly to raise their technical standard, quickly gain practical experience and quickly improve their pedagogical methods, to create a minimum documentation for the students and unconditionally serve them.

First of all, they strove to learn foreign languages quickly so as to be able to complete their theoretical knowledge. Soon, they knew enough Russian and Chinese to read technical publications. Then they learnt German, English and French. Each of them drew up a detailed plan for learning foreign languages, with well defined targets for every six months.

Then, each of them specialized in a given technique (for instance in the building of roadway or bridge foundations, etc.) Everyone chose his specialty according to his own desire but also according to the needs of the collective, which ensured to every member the necessary conditions rapidly to master the subject : books, documents, practical work... The whole collective helped each of its members to become a specialist.

As the collective maintained close relations with building services and construction sites in the country, it often happened that one of its members was requested to serve at these basic units of production. Such requests had to be answered as quickly as possible and the member had to be replaced during his absence. To this end, a certain number of the collective members were obliged to study several subjects so as to be able to replace, if need be, those who had to leave unexpectedly for the construction sites or factories. To acquaint themselves with all innovations, the members of the collective shared among themselves the work of collecting information from some 28 Vietnamese and foreign technical reviews. A technical wall-bulletin gave a sketch of the subjects dealt with in these reviews ; after six months, this bulletin was hung in the lecture hall at the request of the

students, who wanted to acquaint themselves with technical novelties. At the end of 1962, the collective received a number of books newly published in the Soviet Union. They were glad to see that innovations recorded in those Soviet books had been disseminated in time to the students of the College thanks to the collecting of information from foreign technical reviews. Needless to say, the time required for the learning of foreign languages had been solely taken from their rest hours and holidays.

One of the fundamental factors for progress has been the participation in production work. One should not think that construction sites and factories at first heartily welcomed the integration of teachers and students into their work teams. The managers had no confidence in their abilities and did not give them fixed jobs. They often forgot to convene them to important meetings where technicians discussed the work done, which could have been very useful for the students. Besides, certain members of the collective did not realize the necessity to take part in production work. All these reticences, chiefly those of the construction sites and factories, had to be overcome. The first step to take was to render them concrete services. In 1961 for instance the collective did not hesitate to send two of its members for four straight months to lick into shape a bridge-building project. Both of them succeeded in winning the confidence of the Ministry of Communications and also gained valuable experiences for themselves.

Today, the teachers and students of the Bridges and Roads Section of the Polytechnic are found at all construction sites of the country. Every teacher plays the role of a guide to his students and at the same time a technician of the construction site. Teachers and students endeavour to improve work tools and methods of production so as to increase productivity. They also give lectures to the technicians and workers on the construction site where they work. At present the School is in close touch with production units, which often call for its help and regularly supply it with useful technical documents.

Noblesse oblige. The Ministry of Communications and the construction sites often place pressing orders with the group at

times when the latter is busy with other jobs. But their requests must be satisfied, in accordance with the motto "Strive to serve production at all costs".

To link teaching with production often requires the solving of concrete technical problems and a concrete direction for scientific and technical research. In the first years, the group set for itself subjects of research which were far from national realities, thence their work often yielded little result.

In 1962, the group carefully studied the resolutions of the Party on the development of agriculture and industry under the first five-year plan (1961-1965). The discussions which followed the study meetings brought about a readjustment of the programmes of teaching and research. Thus the former subjects of research were replaced by two others which met better the needs of production : how to use pre-strained concrete in the building of bridges and to build cheap roadways for the rural areas where stone is scanty.

The use of pre-strained concrete would help save a considerable amount of steel in a country where this metal was not yet produced. But the technicians of the Ministry of Communications still doubted the possibility of applying this technique to the conditions of our country. The group proposed that a series of lectures on the application of this method should be held for the technicians. A teacher of the Polytechnic came to the Ministry to give a total of 60 hours of lecture on the subject. Thus, the first bridge made of pre-strained concrete in North Vietnam (the Phu Lo bridge) was designed and built.

The development of communications and transport in the countryside, along with agricultural co-operation and the development of agriculture, requires new and bigger roads where the vehicles will not get stuck in the rainy season. But they must also be cheaper than macadamized roads. It must be said that when the matter was entrusted to a member of the group for study he did not show much enthusiasm. A trifling subject, he thought at first. He only set to work enthusiastically when convinced of its economic importance in a country of which the rural areas cover nine-tenths of the whole territory.

To improve the method of teaching also calls for patient and strenuous efforts. Each teacher strives to get the opinions of his students and also of his colleagues, who are invited to attend his classes to give their opinions and advice. Drawings and lectures are constantly modified so as to make them clearer and more intelligible. Once a week, the teachers join the students' study groups to help them solve difficulties and encourage them. The teachers are also on the look-out for any documents from enterprises and construction sites that may illustrate the lessons and give the students concrete examples drawn from national realities. Thus, to help the students prepare their graduation projects, the teachers' group has recopied by hand 2,000 pages of documents gathered from various factories and construction sites.

In 1962, visiting Soviet specialists, after studying the students' graduation projects, made this comment : "These projects have in the main attained the level of Soviet higher technical schools."

But the greatest reward for teachers and students is to be able to contribute by their studies and projects to the development of the national economy. As we have said above, in 1961, for the first time the students had to submit a graduation project ; the subjects studied that year by the students covered a wide range of problems :

— Mechanics-Metallurgy Section :

Study of an automatic lathe, equipment of a medical appliances workshop, of a milling workshop and an electrical motor works, improvement of the lathe 1616 made by the Hanoi Engineering Plant, study of a small rolling mill for a regional plant. (1)

— Electricity-Radio Section :

Study of instruments for radio-electric measurements, projects to enlarge the Vinh and Viet Tri power stations, projects to build hyperfrequency transmitters, oscillographs, measuring apparatus for parameters of semi-conductors.

(1) In the D.R.V. there are central enterprises run by the State and regional enterprises of lesser importance run by the local administration.

— Mining-Geology :

Five-year project to exploit the Tinh Tuc tin mine, supply of compressed air to the Thong Nhat coal mine, a decanting basin and water pipe network for the Co Dinh chrome mine, geological structure and mine prospecting of Son Duong region.

— Construction :

Plans to build a new Medical College, a meeting hall for the Hanoi Engineering Plant, the Dance and Drama School, a medical appliances plant, housing projects and parks in Hanoi.

— Techno-chemistry :

Project to build a cement oven for the local industry in Ha Nam, a turpentine distillery, enrichment of the Na Duong coal with a view to processing it into coke, extraction of tannin from the **cu nau** — a dye-tuber commonly found in the country — manufacture of titanium oxide.

On completion of their studies, the students are sent to factories, construction sites and State farms for a long probation period before receiving their diplomas.

Here are some appreciations of these "polytechnicians" by the services concerned :

From the hydraulic services of Nam Dinh province :

"Comrades Due and Tuan possess the necessary technical ability. We trust them and assign tasks to them with the conviction that they will fulfil them in accordance with the technical norms required by the plan."

From the manager of the Hong Gai (small-sized) blast furnace :

"Comrade Tan has made a valuable technical contribution to our furnace. Excellent conduct, close contact with the workers."

The newpapers of Nghe An province paid high tribute to the knowledge and devotion of Luc, a student in smelting technique, for his contribution to the building of the (small sized) blast furnace of Vinh and his efforts in construction work in Vinh city. The construction site of the Thai Nguyen Iron and Steel Complex highly praised Tran for his innovation in the operation of cranes. Linh, a student of the electricity department, was highly appreciated by the builders of the Ham Rong bridge. Van, a girl student of chemistry, won the following appreciation from the fruit cannery of Tuong Mai : "She boldly applies her knowledge, and knows how to put into practice the workers' suggestions." The textile services highly appreciated the work of Dan, another girl student : "Animated by a high sense of responsibility she has overcome the difficulties encountered during her research on the **cu nau**, a tuber used as a dyestuff, thus realizing an annual economy of 750 tons of tubers worth 225,000 **dong**."

On the construction site of the Thac Ba Dam (100,000kw), we met a whole team of young graduates from the Polytechnic working under the guidance of Soviet specialists. They told us that once this dam was completed they would have gathered enough experience to become full-fledged engineers. It is certain that these graduates still have much more to learn, as their teachers are quite young and the national industry only provides them with restricted possibilities for practice. Yet they have rendered notable services to the enterprises where they work, because they make up for insufficient knowledge by their unfaltering will, extraordinary devotion to their work and their readiness to listen to the technicians' and workers' suggestions and learn from them in order to solve the multiple practical problems of a developing country embarking on the difficult and long path of industrialization.

The Democratic Republic of Vietnam can now be proud of having a sizable contingent of engineers, quite young indeed but eager to build. One of the most important successes achieved by the College is to have instilled this eagerness into the students.

Science and conscience

Often the lamps of the study rooms shine late at night showing couples of friends discussing their lessons, completely absorbed by their conversation. In reality, these are teachers who after their classes are giving tutorial help to students who are working either in groups or individually. Because many students, particularly those coming from among the workers and peasants, encounter a great many difficulties in their studies. Therefore, the teachers deem it their duty to help them fill gaps in their

knowledge of basic notions or understand difficult lessons, or complete graduation projects. If one knows that some professors live dozens of kilometres from the college, come to work on bicycle, and sometimes spend a whole evening helping a single student, one realizes to what extent they are devoted to their teaching task. In response to this devotion of the teachers, the students pledge themselves to win success in their study.

Here is Dang Duc Song who has just graduated as a radio engineer. The son of a poor peasant family, he lost his parents when eleven years old, and became boy-servant to a rich man of his village. It was in 1945 : the struggle for national independence was in full swing, but the agrarian reform had not yet been carried out. Little Song experienced the harsh life of a servant under the feudal regime. Moreover, his village was then in the zone temporarily occupied by the French Expeditionary Corps. In 1947, unable to bear it all he had a fight with his master's son and fled to his elder brother's in a nearby village. In 1950, he was a liaison agent for the guerillas in his village, guiding the cadres from one village to another and gathering information about the enemy. In 1952, he joined the regular army and fought first in the Northwest (the mountain region between the Red River and the Laotian border), then in the Dien Bien Phu campaign. His brilliant records won for him the well-deserved title of "Army Hero". When peace was restored in 1954, he had just learnt to read and do the four simple arithmetical operations, still having difficulties with divisions. He followed the complementary courses in the army. In 1960, his unit sent him to school. He finished in three years the 10-year general education programme. Then he entered the College. As he had served in the signal corps in the army, he enrolled in the radio department. "It was truly hard", he said to us, "especially in the first year. Sometimes my head swam and I had to plunge it in cold water. It was all the harder since in 1960 I was elected to the National Assembly. I grew thin visibly, and my wife sometimes asked me what I was dreaming of. No I was not dreaming but only trying to remember lessons of mathematics and physics even when I was taking a walk with my wife. I had also to learn a foreign language. I chose Russian and it was not easy. Some advised me to give

up. But how could I give up a task assigned to me by the Party and the army? Decidedly, I could not. Thus I made up my mind to continue my study. At last I worked out ways to fully grasp the lessons. First of all, I reviewed at night all I had learnt in the daytime. On my bed and in darkness I recollected every detail of the lessons I had learnt and so remained awake very late at night. Another method consisted in preparing painstakingly questions which I would ask my professors or more advanced friends. At the beginning, I relied entirely on them and benefited little from their explanations. I then decided to study the lessons by myself, to analyse them and then to classify the questions I would ask my teachers or comrades. This method helped me greatly in my study. After two years, I reached the average level of my class. The last two years I worked as hard but the tension was less. Then I was ranked among the best."

Do Trieu Cuong was a former cadre of the Sanziu minority. Before the revolution, nobody in his district could read and no one, even among rich families, could say what "to become an engineer" meant.

In 1959, Cuong had just finished the first (primary) level of general education. At the complementary school for workers and peasants he finished in three years (instead of five) the programme of general education. He afterwards passed the entrance exams to the Polytechnic College. His first year was a particularly hard one but by dint of painstaking efforts he succeeded in passing his end-of-year exams. In the second year, he was ranked among the best, got the grade 5 (excellent) in 4 subjects and 4 (good) in two other subjects at the control exams. He was then entrusted with the task of helping others who met with difficulties in their study, especially during the period of preparation for the exams. He was responsible for a group of youth. Under his impulsion his study group broke the College's record in the yearly production of vegetables, growing as much as 30 kilograms per head. Cuong himself produced 90kg. He shirked no task assigned by the College. In 1964, he was admitted to the Party.

Ho Thi Cam, a girl native of South Vietnam, came to Hanoi in 1955. Her schooling had been frequently interrupted by the war and she had serious troubles following the courses at the

College. The gap in her basic education caused her great difficulties in grasping many subjects. Discouraged, she often thought of giving up her studies. But reports from the South each time gave her new ardour. She thought of her parents and relatives in the South. In face of the U.S. aggressors and their lackeys, they never lost courage or relaxed their fight. How could she, who was brought up and educated by the government, think of giving up her studies ? She said to herself : "When the South is liberated, who else will build the factories, bridges, and railways if not the South Vietnamese youth who, now regrouped in the North, have the good luck to continue their studies while others of their age are fighting arms in hands for the freedom of all ?" She rapidly overcame her discouragement and set to study in earnest. In the second year, she ranked among the best of her class and was elected a responsible member of the youth organization. The same year she had the honour to be admitted to the Party.

It would take volumes to cite all such examples of industriousness — it would be more accurate to say heroism — in study and teaching among teachers and students of the Polytechnic College. Even the most sluggish finally move along, supported and stimulated by a closely-knit community which urges them to make tenacious efforts and helps them overcome all obstacles. The path is difficult not only for those who had to create from scratch a Polytechnic College in a country which had neither engineers nor industry, *i.e.* for teachers and students, but also for the young graduates who go to work in factories or construction sites where everything is lacking, from machines to skilled personnel. To be a teacher at the Polytechnic College, to be an engineer of the Democratic Republic of Vietnam is indeed an honour but not a sinecure. College teachers and engineers are senior cadres, honoured and entrusted with the highest responsibilities. But the D.R.V. is a poor country now engaged in building socialism ; while requiring much of its cadres, it cannot yet afford to pay them generously. Senior cadres share weal and woe with the people in the long work of material and cultural construction which is to transform an under-developed country into one with a modern socialist culture and economy.

The engineer must share the hard life at the construction sites and factories under construction. He must at all times be an innovator, think of details which would be no problem at all in a highly industrialised country. He must on the one hand grasp the most up-to-date techniques and know how to solve practical problems that crop up unexpectedly. To this end, he must not only develop his own efforts, but also know how to associate himself completely with working collectives and learn from the masses of workers. The Polytechnic College has assigned to itself right at the beginning the task of training not mere engineers but socialist engineers, the aim being not to train pure technicians but men who

— possess advanced scientific and technical knowledge and who know how to apply it to solve the practical problems of the national economy,

— have a high political consciousness and an excellent moral standard and are resolved to struggle for the building of socialism and for the people's welfare,

— have a good health, are capable of assiduous work and ready to defend the country when necessary.

It must be pointed out that the Polytechnic College sometimes refuses to grant degrees to students who have made good studies but lack certain indispensable moral qualities. The engineer is considered a responsible senior cadre, not a technician selling his services for a salary.

The Polytechnic College is a socialist school because it pays great attention to ideological problems, to selecting cadres and students and to teaching and studying on the basis of Marxism-Leninism.

The selection of students and cadres is undertaken along a well-defined class line. The College always admits an adequate number of workers and peasants capable of undertaking study and organizes for their benefit special refresher courses to help them fill the gaps in their education. With regard to graduates from general schools, priority is given to the best, both from the intellectual and moral points of view. Large numbers of them are already members of the Labour Youth Union before their admission to the College. The teaching staff (as well as

laboratory and administrative personnel) must serve as examples for the students. That is why the moral and ideological criterium is as important for the choice as the scientific standard. A professor, consciously or unconsciously, always teaches certain moral principles to his students.

The general line and the principles of socialist education are reflected in teaching by close connection between theory and practice, between study and production work, and between study and scientific research. Probationary terms at factories and construction sites enable the students to acquaint themselves with practical problems in production. Each student must acquire the technical capacity of a worker of the first or second grade in a given trade.

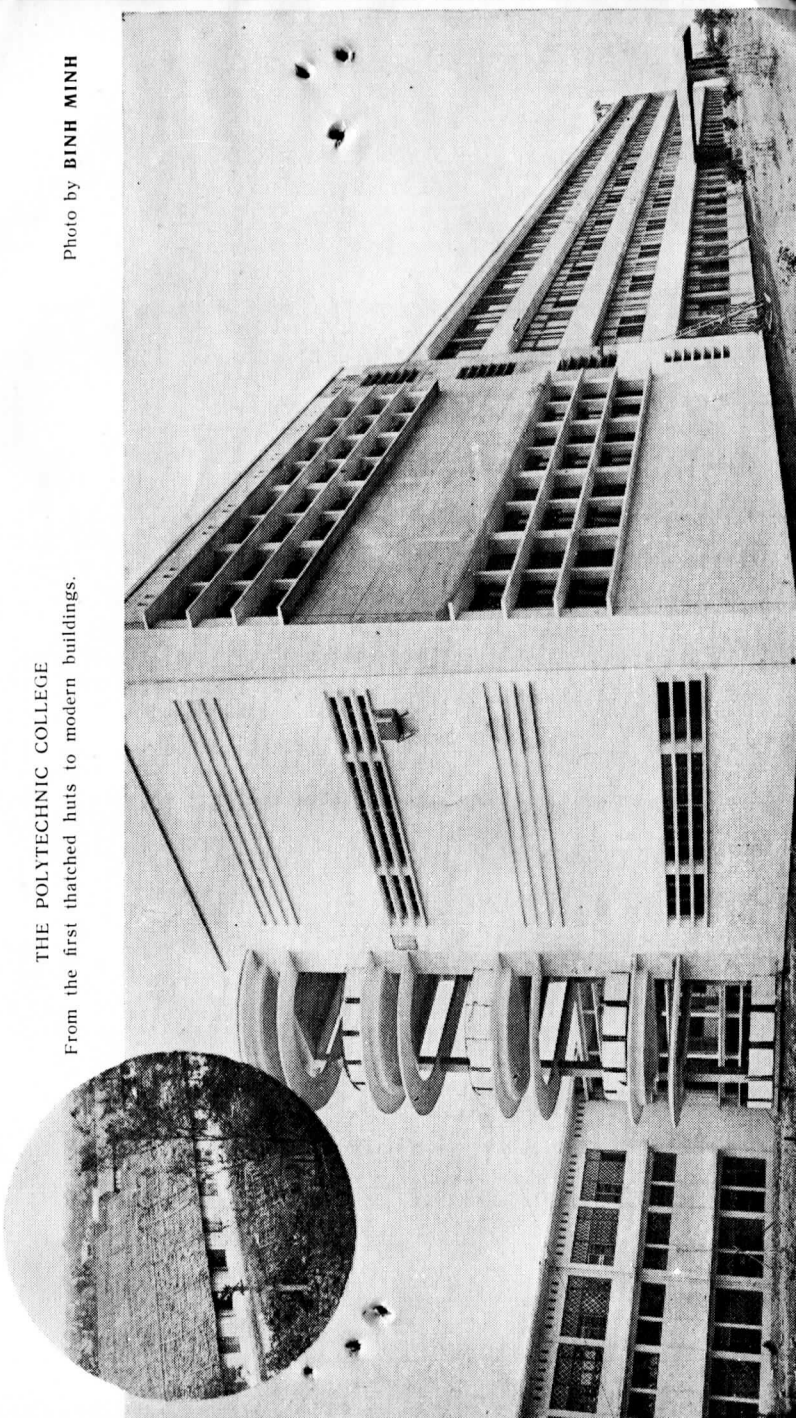
Each section of the College tries to establish close relations with factories, construction sites, services or ministries where the teaching cadres offer to take various practical responsibilities. Research and graduation projects are directly drawn from the practice of national production. Thus the section of resistance of materials for instance has studied the problem of the wearing out of railway tracks raised by the railway service which has seen intensive traffic these last few years. Cadres and students of the section of operations research in the mathematics department followed during many nights the route of rubbish-removing lorries in Hanoi to determine the most economical itinerary. During the 1963-1964 school year, the College contributed to the successful study of 20 problems posed by production (see appendix to this article).

Cadres and students are educated in such a way as to guard them against despising elementary manual work. They practise at the College workshop every possible useful work. They clean buildings and sweep alleys and lawns within the campus. Great attention is paid to the growing of food crops inside the College enclosure. Sweet potato fields and vegetable gardens are seen everywhere and there is even more than one hectare of rice. Besides, cadres and students periodically work at State farms in accordance with the general policy which requires that every cadre should produce yearly a set percentage of his own consumption of foodstuffs.

THE POLYTECHNIC COLLEGE

From the first thatched huts to modern buildings.

Photo by **BINH MINH**



Thus in 1964 the College produced

342 tons of cassava roots
1.5 tons of rice
9 tons of sweet potatoes
4.6 tons of groundnuts, and
65 tons of vegetables ;
raised 518 pigs, and planted 1,500 fruit trees.

Political studies constitute an integral part of the programme. Each student must have a grounding of Marxism-Leninism and the history of the Vietnamese revolution so that he may view his own task against the background of the situation in the country and the general evolution of the world. He is kept informed of major national and international events of the day and directly participates in the great political movements in the country. Thus, during the summer holidays of 1964, the Vietnam Labour Youth Union branch of the Hanoi Polytechnic organised tours of the country during which the students launched an active movement of explanation on the situation in South Vietnam through the commented reading of **Letters from South Vietnam** (1) They also took part in meetings to "recollect past misery and humiliations" in which cadres and students, in particular those coming from poor families, recalled all the sufferings they and their families had had to endure during the colonial and feudal period.

Political education is also aimed at opposing tendencies and habits inherited from the past. If a student loses sight of the common interests and thinks too much of his own future or asks for too much comfort and remuneration or shrinks before difficulties and hardships, or shows lack of the sense of responsibility, the teaching cadres and members of the Students' Union and the Labour Youth Union immediately seek to redress these erroneous tendencies and help him rectify his viewpoint.

Every big event that shakes the country has a deep repercussion on the College and often gives rise to an emulation movement among the teachers and students. In 1962, in South

(1) **Letters from South Vietnam** has been published in English and other languages by the Foreign Languages Publishing House, Hanoi.

Vietnam, the Americans and their Saigon stooges sentenced to death the young teacher Le Quang Vinh who displayed admirable heroism and patriotism before the court. Immediately, the teachers of the Road and Bridge Department whose history was related above, admitted Le Quang Vinh as an honorary member of their group. They began doing voluntary supplementary work as if a new member had been added to their group. Their department was recognized as a "Socialist Labour" team. Other departments followed suit and endeavoured to improve their work in order to win this title, participating in a general movement which involved all categories of workers in the country. The execution by the Saigon puppets of the young patriot Nguyen Van Troi on orders from the Americans aroused strong emotion at the College. All teachers and students vowed to do their best to hasten the liberation of the South and the reunification of the country.

This year, the Labour Youth Union branch of the College has launched a "three any" movement :

— To go anywhere they are needed for national construction work ;

— To accept any task to serve the people.

— To accept any regime of treatment and salary.

The engineer must be a technician and at the same time a militant. It is only natural that along with the organization of studies mass organizations play most important role : The Students' Union, the Vietnam Labour Youth Union and the Trade Union of the school personnel. The Workers' Party branch leads (distinction should be made between leading and administration work) all the manifold activities of the College so as to orientate them along the general line and the socialist principles.

All this has not been accomplished overnight. The first years were particularly difficult ones, not only from the material point of view or as far as the technical aspect of the teaching is concerned, but also from the ideological point of view. Besides those who had been trained during the war of national liberation, a sizable part of the students sprang from bourgeois families and had been educated in schools operating in former enemy-occupied areas in a spirit completely opposed to the revolutionary

socialist conception. Many were particularly proud of the French baccalaureate (senior secondary school degree) they had passed, openly manifested their opposition to learning together with workers and peasants in the same classes, showed indignation at having to do manual work and worried about the modest pay which the new regime accorded to engineers. They entered the College with the thought of becoming pure and privileged technicians, staying aloof from all political problems. As to the teaching cadres, their only major concern was how to teach well in order to impart a given amount of knowledge to the students. They had no idea at all about how to give a comprehensive and socialist education. Some of them still imbued with out-dated ideas, could hardly imagine that a "university professor" should live in straw huts and take part in cleaning school buildings.

However, the college was in good hands. Its directorate was composed of cadres having taken part in the resistance and among the students there were many cadres, workers, peasants and demobilized armymen who through their own examples, gradually succeeded in helping the students of bourgeois formation and origin to change their conception. In 1958, two years after the setting up of the College, cadres and students worked side by side at the Bac Hung Hai construction site, one of the most important irrigation projects of the country. This project was to bring a radical change in the living conditions of several million peasants in an area particularly threatened by drought and floods. A good part of the work had to be done by hand. For nearly two months, professors and students did active pick-and-shovel work, carried clods of earth on their shoulders and floundered in the mud together with tens of thousands of peasants, workers, and armymen. Ministers, deputies to the National Assembly, ambassadors, artists and writers also came from time to time to participate in the work. Bac Hung Hai marked a real turning point in the life of the Hanoi Polytechnic : the long contact with the workers and peasants and the direct participation in a great national undertaking instilled a new vigour into the teaching cadres and students. They acquired a much more concrete idea about what an engineer must be in a poor country having to build a modern, independent and national economy, under a people's socialist regime where everything

must serve the people's interests. Since the Bac Hung Hai drive, to quote the leaders of the College, "we have succeeded in planting the flag of the Party atop the College", that is to say in implanting the Marxist-Leninist conception of education in the daily practice of the College.

But this does not mean that all has been setted for the best. Far from that. Acute problems of growth have cropped up. The great concern at present remains how to raise the scientific standard of the studies to that in advanced countries. To this end, we must raise the scientific — theoretical and practical — level of the teachers, improve the content of the teaching, and continue extending the material basis of the College.

But at the basis of all progress there should be a raising of the ideological standard of cadres and students. Man is not a machine. To advance quickly and in difficult conditions, he must know the reasons for his acts. Without these motives, namely national independence and socialism, the Polytechnic College would be only a soulless body, a flabby rachitic faculty.

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October 20, 1964. At the stadium of the Polytechnic College over 7,000 people listened to the director of the school reading the records of last year. It was a "festival of emulation". The rostrum was brightly illuminated, but the projectors only threw a feeble light on the stadium where 7,000 persons sat on the grass listening attentively ; in the dim light their bodies hardly stirred, but their eyes shone with youthful ardour. Public praise was given to those who during the year had done exemplary work, to front-rank groups and teachers who had shown self-devotion worthy of admiration, and to students who had made strenuous efforts and obtained outstanding results.

Suddenly, I pricked my ears in surprise. The director no longer mentioned the names of exemplary teachers or students, but spoke about someone who raised pigs. What was she doing here, this woman pig-breeder, among picked professors and students ?

"Comrade Tran Thi Luc", said the director, "was a cook in 1962. In 1963, she was entrusted with raising pigs, a hard work to which she devoted herself body and soul, and during two consecutive years, she was elected a model worker in the emulation movement. She has been a Party member since 1939, and has taken part in various revolutionary struggles ever since, carrying out her activities in extremely hard conditions, risking her life at every moment as a responsible cadre of a district. In spite of her bright record of services she has never asked for a particular post ; instead she has readily accepted any task assigned to her. She is now earning one of the lowest wages."

A long ovation and repeated applause greeted a tiny woman in a peasant costume who stood up from the rostrum to return the cheers. All this intelligentsia warmly welcomed this pig-breeder into the ranks of its elite elements. Let us add that she has been elected a member of the Party Committee of the College.

I thought for a long time of Comrade Luc. All the time I was at the Polytechnic College to gather materials for my article, I only gathered them from the professors and students. The applause welcoming Comrade Luc reminded me that I was in a socialist college. Here, the students and their teachers are closely associated not only among themselves but also with all staff members of the College — administrative personnel as well as manual workers. That a pig-breeder should also contribute to the training of engineers, this fact in itself is enough to show us that we are entering a new era.

The Hanoi Polytechnic College is the product of a new period, a new society, and the engineers trained there will contribute to make it still richer and more beautiful.

THE HANOI POLYTECHNIC COLLEGE

I. Students, graduates and teachers		1956-57	1964-65
Number of students	:	1,095	7,400
Students of day-time classes	:	1,095	5,600
Evening and correspondence classes	:	0	1,800
Girl students	:	56	500

Social origin of the students

		1957	1964
Worker family	:	5.4%	9.6%
Peasant family	:	24.5%	52.5%
Poor strata of urban population	:		8.6%
Other social strata	:	70.1%	29.3%

Graduates since 1961

In the different branches of heavy industry	:	2,600
In the different branches of light industry	:	300
Civil engineering, bridge and roal building, hydraulics	:	1,200

Teaching cadres

1957	1964
50	710

II. Subjects taught

Engineering and metallurgy

Mechanical engineering
Motor-cars, tractors
Technique of textile materials
Metallurgy of ferrous metals
Metallurgy of non-ferrous metals
Smelting and thermic treatment
Building machines
Weaving machines

Electricity and radio

Electricity production and transmission.
Sub-stations, network and systems of distribution.
Electrification of plants and factories.
Thermic electricity.
Thermo-power stations.
Radiotechnique.

Civil engineering, bridge and road building, hydraulics

Construction of motor-roads
Construction of railways.
Construction of bridges and tunnels.
Hydraulic works and hydro-electric stations.
Civil and industrial construction.
Urban construction and management.
Water-ways and harbours.
Architecture.

Mining and geology

Geological and mine prospecting.
Exploitation of mines.
Hydrogeology and geology for engineers.
Enrichment of ores.
Topography.
Mining machines.
Boring.
Electro-mechanical mining equipment.

Techno-chemistry

Techno-chemistry of non-organic materials.
Techno-chemistry of organic materials.
Technique of silicates.
Technique of food products.
Machines used in chemical and food industries.

Elaboration of a SCIENTIFIC TERMINOLOGY IN THE VIETNAMESE LANGUAGE

LE KHA KE

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The working out of a scientific terminology in the national language is of capital importance for the development of science and technology in a country. The task is of extreme urgency in Vietnam because the building of socialism requires the formation of a great number of scientific workers, the rapid development of the sciences and an extensive diffusion of scientific knowledge on the basis of our national language, rich from the literary point of view but still poor in scientific words.

Prior to the August 1945 Revolution, education was given only to a handful of well-to-do people, and the country was backward in the scientific and technical fields. French was imposed by the colonialists as the medium language in schools at all levels ; Vietnamese was kept in the background and studied only as a 'living language'. Therefore, if some Vietnamese scientific words were used in books and papers, they were very few in number ; there was almost no terminology in the natural sciences and only a small quantity of scientific words used in the social sciences.

But this policy of cultural enslavement carried out by the French colonialists could not attain all its objectives in the case

of a people with a very profound national feeling and a deep-rooted revolutionary tradition. By 1941-1942 a small group of patriotic intellectuals published the weekly **Khoa hoc** (Sciences) in Vietnamese and undertook to elaborate some French-Vietnamese scientific glossaries. The success of this work dissipated all doubts and proved that our language is able to express the most accurate scientific notions and that the working out of a complete scientific terminology in our national language is not an Utopia. However the glossaries worked out at that time comprised only a limited number of branches (mathematics, physics, chemistry, biology, medicine) and strictly speaking were but rough outlines, hence their restricted effects.

The August 1945 Revolution, which abolished colonialism for ever, gave a new impulse to the growth of the national language. Vietnamese was decreed the medium of instruction at all levels. The work of elaborating a scientific terminology in Vietnamese became urgent and received particular attention from our government. It would have been completed at a much earlier date if the hard conditions of a war forced on us had not delayed its completion.

After the restoration of peace in North Vietnam our scientific workers, under the unified leadership of the State Scientific Committee and turning to account the numerous experiences gained during the years of the Resistance War, have worked with a zeal worthy of the confidence placed in them by the Party and the Government. The terminology of over 30 different branches has been completed or is nearing completion, totalling more than 700,000 words, sufficient for the teaching work in 14 schools of higher education with over 23,000 students, for the publication of 26 scientific reviews and for the printing of 16,260,000 copies of text-books, about 11 per cent (1963) of them for higher education.

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Scientific terminology, as is known, must keep a national form so as to be part and parcel of the people's language and not an esoteric jargon. From the scientific point of view the coined words

must be concise, clear and not liable to be the cause of confusion. To each object, each phenomenon, each element, must correspond a proper term. On the other hand the terminology must have a systematic character so that by basing oneself on a given word one can understand all those relating to it. From the national point of view, the words created must be easy to read and to understand ; they must be phonetically familiar to Vietnamese ears and consistent with the rules governing the formation of Vietnamese words. In my report I will insist chiefly on the national side of the problem, i.e. on how to work out a scientific terminology in conformity with the spirit of the Vietnamese language.

In our work for all branches of science we can choose among the three following methods :

— phoneticizing of terms borrowed from an European language.

— use of Sino-Vietnamese words.

— use of materials proper to the Vietnamese language.

The phoneticizing of words borrowed from an European language gives many an advantage from a scientific point of view. It enables us to get at once all the necessary words, most of them being more or less international and already forming a unified and coherent system. But it has a serious drawback : the phoneticized words are pronounced and read with difficulty, they do not bear the least resemblance to the national vocabulary and cannot be used for an extensive diffusion of scientific knowledge among the masses of people. Besides, ours is not one of the Indo-European languages ; consequently the chief means of elaboration of scientific words in our country cannot be the phoneticizing of foreign words, but the coining of new words from the national morphemes. The phoneticizing is actually used only in branches demanding a great uniformity in terms of a distinctly international character such as chemistry (for the names of chemical elements and compounds), pharmacy (for the names of pharmaceutical products), geology (for the names of rocks and minerals), etc... In order to restrict the aforesaid disadvantages, usually we do not retain all the syllables of the borrowed word but shorten it. In this way many usual French words have become Vietnamese by complying with the monosyllabic tendency.

Thus, *commissaire* (superintendent of police) becomes **cam**

enveloppe (tyre) — **lop**

kilogramme — **ky**

In the elaboration of scientific words we have widely applied this method. But it is obvious that we cannot indulge too freely in this monosyllabism without serious risk of creating confusion. And so, usually, we have to retain not one but two or more syllables.

Thus logarithm becomes **loga**

nitrogen — **nito**

hydrogen — **hydro**, etc...

Moreover, to secure scientific accuracy while keeping simplicity in writing, we deem it necessary to bring in a number of new grafts, such as the initial consonants **f, j, p, w, z**, the double consonants **br, cr, dr, pl, pr, ps, sp, st, tr**, as well as the last consonants **c, l, z**, in **ic, ol, al, oz**. With these grafts we write, for example : **parafin, brom, étanol, axetal, glucoz** etc... Here too we do not pretend to be an innovator, because some of these grafts are not completely unknown to our compatriots. For example the initial consonant p figures in the world **puoc**, designating a national minority in our country. And in common parlance we frequently say **poplin, pin** (*pile* : dry cell), **pathet Lao**, etc... That is why the introduction of these grafts is but, in fact, a natural phenomenon in the normal development of our language, and does not in any case impair its clearness and purity. However, to avoid useless changes in a domain where the force of habit is strong we make use of these grafts only when their absence in the created words is liable to cause confusion. For instance, as the suffix '**ol**' is always used to specify the alcohol function, we write **étanol** and not **étanon**, although in our language the syllable '**on**' exists and not the syllable '**ol**'.

Finally, although the Vietnamese language is normally written in separate syllables, we write the phoneticised scientific words in connected syllables. Thus : **axit, amoniac, parabol, electron**, etc. In fact, this tendency seems to have spread to usual words, because the Vietnamese language, though monosyllabic in its morphemes, is polysyllabic in the formation of words.

The use of Sino-Vietnamese words also presents great advantages. China has a very ancient culture and a scientific tradition of long standing, and so its scientific terminology is relatively complete. Therefore if we borrow from China its existing terminology we will have at once almost all the necessary words united in a system both coherent and rational. Moreover the Chinese language pronounced in the Vietnamese way and for that reason called Sino-Vietnamese had for two thousand years in our country served as a learned language on a par with the popular parlance — Vietnamese proper — like Latin in ancient Europe. Sino-Vietnamese is not strictly speaking a foreign language, its phonetic system being in its outlines identical with the Vietnamese phonetic system.

Therefore, for some branches such as philosophy and politics, many terms in Sino-Vietnamese have been used since long. Following the tremendous efforts exerted by our Party for the political education of the people, Sino-Vietnamese words in these spheres have become familiar to the Vietnamese public. This presents a great interest, because Chinese words pronounced in the national way in many countries of Eastern Asia — China, Japan, Korea, Vietnam — constitute an effective means for mutual understanding in the ideological field. In other respects, of all the scientific branches, philosophy and politics have, under the leadership of the Workers' Party, known a great development. Difficult works such as those of Marx, Lenin, Stalin, Mao Tse-tung are already accessible to Vietnamese people with some degree of culture. The political level of the Vietnamese people is relatively high even when compared with those of the most advanced countries. Every Vietnamese knows very well words such as ideological stand, philosophical point of view, materialism, idealism, conception, class, etc. It can be said that in philosophy and politics we have got a fairly complete system of words, most of them already accepted by the general public. As a result of this, the work of building terminology in these sciences does not essentially consist in creating new words but rather in a general review of words borrowed from Chinese. The question is one of choice when two or more words are used to designate the same notion. The question is also to try to replace in so far as possible Chinese words by properly Vietnamese words, and

to modify the structure of the borrowed words so that they are in conformity with the rule of formation of Vietnamese words. Thus we say **chu nghia xet lai** instead of **tu chinh chu nghia** (revisionism) **thi dua** instead of **canh trai** (emulation) **giai cap vo san** instead of **vo san giai cap** (the proletariat), etc.

For the other social sciences such as literature and linguistics, and for all the natural sciences the problem is quite different. Here the task is not one of reviewing words borrowed from Chinese but of creating new ones in our language. The reason is that for certain notions the existing words are not yet universally accepted. To speak only of linguistic terms, for the word "adjective" for example, we have to choose from **tinh tu, pham tu, dinh tu...**; for the word "grammar", from **van phap, van pham, ngu phap...** etc. Besides, it is not unusual that a Chinese word gets in our country a rather different meaning. Thus **phuong ngon** in Chinese means "dialect" while in our country it means "proverb". Finally the Vietnamese language enables us to create the necessary words which fully meet the conditions required from the scientific point of view, while being easily understood and accepted by the masses. Indeed, in the formation of these words we have often to borrow from Chinese roots, but the coined word still keeps an entirely Vietnamese form and structure as we shall see later.

The use of Vietnamese materials for the coining of scientific words is unquestionably the chief method in use. To bring this work to a successful end we find it necessary to solve the three following problems which are important from the theoretical point of view :

— the national form of the words ;
— their scientific precision ; and
— their systematic character.

The question of the national form of the terminology can be solved radically only on the basis of the elucidation of the following problem. Why in the present-day language some words sound familiar and are considered "good Vietnamese", whereas others sound unfamiliar and are considered "bad Vietnamese",

even foreign. Such words as **ven bien** (coast), **tau bay** (aircraft)... belong to the first group, while **duyen hai** (coast), **phi co** (aircraft) to the second. A systematic study of the Vietnamese language from the structural point of view has shown that this distinction is not dictated by the historical origin of the words, but rather by the opposition in the formation of words between the free and non-free elements of the language.

The free elements are monosyllables having a meaning of their own and able to form by themselves independent words. **Ven** (border), **bien** (sea), **tàu** (vessel) **bay** (fly) are elements of this kind. **Ven bien** (coast), **tau bay** (aircraft)... are composites in which both components are of a free nature and can form independent words. The free elements can be of purely Vietnamese origin, such as **cha** (father), **chông** (husband), **anh** (brother), **em** (young brother)... or of Chinese origin, such as **co** (aunt) **cau** (maternal uncle), **duong** (sugar), **qua** (fruit)..., or they may spring from the Kwangtung dialect such as **mi, pho** (Chinese soup)... or French such as **lop** (*enveloppe :* tyre), **tach** (*tasse :* tea-cup) etc. In spite of this etymological diversity, they are familiar and entirely Vietnamese.

On the contrary, every non-free element clearly appears as a borrowing, as not Vietnamese. Are called non-free all monosyllabic elements unable to form in any case independent words by themselves. Some have no meaning at all. It is the case of all the elements used for the phoneticising of foreign words. So **cao, su, phot, phat** have no meaning by themselves and exist only in **cao su** (*caoutchouc :* rubber), **phot phat** (phosphate). Other non-free elements have meaning of their own such as **duyen** (border), **hai** (sea) **phi** (to fly), **co** (engine), but cannot for all that be used independently. In a word, all the elements called Sino-Vietnamese are in reality non-free elements having a meaning of their own.

It is this opposition between free and non-free elements which is at the origin of the distinction between the elements appearing as purely Vietnamese and those that seem to be of foreign introduction. In short, the question here is a synchronous opposition in the formation of words and not a diachronous opposition in etymology.

It is obvious that to solve this question of the national form of scientific words, we must make use of both free and non-free elements. (1) Indeed, it is more advisable to use free elements in all circumstances because the words created in this way can be understood more easily and are "good Vietnamese'. But this does not mean that we shall utilize only free elements and thrust aside every non-free element even when it is suitable. This way of working which reflects an unjustified purism, is in addition in contradiction with the traditions of our language, because in reality more than one half of the Vietnamese vocabulary is made up of Sino-Vietnamese elements, that is to say, non-free elements.

On the other hand, one must turn to account the fundamental differences between free and non-free elements envisaged in the following respects :

1. From the semantic point of view, non-free elements are in general abstract while free ones are more concrete. This is quite natural. Non-free elements, which do not exist in the language as words but only as constituent particles of words, cannot for that reason represent something concrete. The element **nhan** (man), for example, can only give a notion of man in general, and exists only in **nhan dan** (people), **nhan dao** (humanism) **nhan quyen** (rights of man), etc. On the other hand, free elements, by their liberty in speech and by their long existence, have already acquired a high degree of concreteness and represent clearly defined things. That is why most abstract notions are indicated in Vietnamese by words with a non-free element, while nearly all the words designating concrete objects or phenomena are coined by free elements.

Having realised the above-mentioned contrast between the free and non-free elements, we have proceeded in the following way.

a) For all concrete notions, we give without hesitation priority to free elements. Therefore 'Vietnamese' words constitute the

(1) For the sake of simplicity, "non-free elements'' henceforth means "non-free elements with meanings of their own'', i.e. Sino-Vietnamese elements.

greater part of the vocabulary of the biological and medical sciences. For example :

Amnion	is called	**mang oi**	and not	**duong mo**
anaemia	—	**thieu mau**	—	**ban huyet**
jaundice	—	**vang da**	—	**hoang dan**
pseudopod	—	**chan gia**	—	**gia tuc**

This way of doing seems at first very simple, even evident. In reality it is of extreme importance and very difficult to realise. Its importance lies in the fact that if one is not fully conscious of the superiority of free elements over non-free elements in the expression of concrete notions, one will not have the boldness to go to the end. Besides, its realisation is difficult, because one must first of all fully realize the great possibilities of one's mother tongue, and overcome the inferiority complex freely exploited in the old times by the colonialists, which made us consider our national language as poor and unfit to express precise notions : without this confidence, one is easily disposed to accept a ready-made word of the Chinese terminology, without taking pains to find the Vietnamese equivalent. And to find out this 'Vietnamese' word, the task is not easy ; sometimes it is only after a serious investigation and a thorough analysis of the existing words that one succeeds in singling out a proper one. The work is indeed arduous and painstaking but highly rewarded, for it makes the words less stiff and more comprehensible for the masses. We have directly taken our inspiration from the instructions of our political leaders who do not cease to encourage us to follow this course. However, to avoid introducing useless changes, we think it necessary to maintain certain Sino-Vietnamese words which have become usual and are relatively easy to understand, for instance :

dien tu	for	electron
tam that	—	ventricle (of heart)
tam nhi	—	auricle (—)

b) For abstract notions, most of the time we use non-free elements and apply the following two methods : either to use

Sino-Vietnamese words after changing them, or to coin new words by means of associated Sino-Vietnamese elements (such new words may not be found in the Chinese vocabulary). Especially, the second method, which concerns the formation of words by association of non-free elements, appears to correspond to that used to insure the preciseness and systematic character of newly-coined words (see further). So, we have created such physico-mathematical words as :

dang nhiet	for	isothermal
dang huong	—	isotropic
noi tiep	—	inscribed
ngoai tiep	—	circumscribed
bang tiep	—	exinscribed
tiem can	—	asymptote, etc...

2. A second opposition from the semantic point of view between free elements and non-free elements lies in the polysemic character of the former and the monosemic character of the latter. Free elements, which can exist in many different contexts, are apt to convey various meanings (polysemic), while non-free elements, reduced to a small number of associations, can have only one definite meaning (monosemic). Used independently, non-free elements will form words which will convey only one meaning, and an abstract one. This indeed is a phenomenon which occurs often in the Vietnamese language : Sino-Vietnamese elements, in certain conditions, can be used as independent words. We have turned to account this particularity in the formation of physico-mathematic words such as :

luc	for	force
truong	—	field
the	—	potential
pho	—	spectrum
he	—	system
tuyen	—	line
ham	—	function
can	—	root, etc...

In case no suitable non-free elements are available, we use free elements, giving them a very specialized meaning. We use for instance :

tam	to designate	centre
dang	—	form
the	—	body
cach	—	case (in grammar)
thoi	—	tense (—)
ngoi	—	person (—)

3. In the constitution of words, the opposition between free and non-free elements lies in the degree of cohesion of the words of which they are the constituents. As is known, every scientific word must have a definite degree of cohesion ; otherwise it could not exist independently from the context, which at each time would modify its meaning. Considered from this angle, non-free elements are definitely superior to free elements. As they cannot exist independently by themselves, non-free elements, once associated with another element in any position, form straight away words of a high degree of cohesion, monolithic so to speak. We have largely taken advantage of this fact to form series of words of a great unity, by using non-free elements as affixes. For instance in mathematics we have :

da giac	for	polygon
da dien	—	polyhedron
da dieu hoa	—	polyharmonious
da thuc	—	polynomial
da huong	—	polytropic
da vecto	—	polyvector

In this work we have to fight against an exaggerated purism which refuses to recognize the formation of hybrid words constituted by elements of different origins. The fact is that these hybrids are not rare in our language. **Thi gio** (time), **danh tieng** (fame), **suc luc** (force), **trang bach** (mat white), **le phep** (politeness), **hoc hoi** (study)... are words made of a Vietnamese element associated with a Sino-Vietnamese element.

So, whenever this is inevitable, we do not hesitate to use hybrids, for instance :

anbumin nieu	for	albuminuria
axeton nieu	—	acetonuria
mo nieu	—	lipuria, etc...

To give the newly-coined words their scientific preciseness, we take care not to form them separately but to confront each word with all other words related to it, so as to avoid the adoption of different words to designate the same notion, or the use of a single word to express different notions. In biology, for example, confusion may arise between the notions : type, form, etc. ; that is why we must gather all these notions and find for each of them the corresponding word. In this way we render.

aspect	by	**trang**
type	—	**kiêu**
form	—	**dang**
model	—	**mau**
morpho	—	**hinh**
oidal	—	**loai** etc...

This process, called formation of words by opposition, requires that the terminologist should fully grasp the main notions of the science concerned, and the essential differences between these notions, before he can find the word corresponding to each of them. Thus by this process, we have obtained, in medicine, such words as :

su co	for	contraction
co cung	—	contracture
co khit	—	constriction
co giat	—	convulsion
co that	—	spasm

In geology we have :

xam thuc	for	erosion
tai mon	—	ablation
mai mon	—	abrasion
thoi mon	—	deflation

boc mon	—	denudation
bao mon	—	corrasion
gam mon	—	corrosion
khoet mon	—	excavation

What is essential in the formation of precise scientifc words is to take advantage of the opposition between free and non-free elements from the semantic point of view. This opposition makes ours a very precise language. In fact Vietnamese has in most cases for each main notion and each usual object at least two synonymous words, the one of a free nature, the other of a non-free nature. Thus, for the word "two", we have more than two synonyms divided into two opposed series : **nhi, trung, song, doi,** on the one hand, and **hai, doi, diep,** on the other. This opposition enables us to form the following linguistic terms :

nguyen am doi	for	diphthong
cau am doi	—	double articulation
but **phep diep**	—	redoubling
phu am diep	—	geminate
tu song thuc	—	doublet
the doi lap	—	opposition, etc...

Thus we have been able to translate all the shades of the word "two".

Knowing how to take advantage of the opposition from the semantic point of view between free and non-free elements, we can find appropriate words for kindred notions, distinction between which is very important, as for instance the distinction between :

la nho (small leaf)	and	**la chet** (leaflet)
bao tu lon (large spore)	—	**dai bao tu** (macrospore)
tu nho (short word)	—	**tieu tu** (particle)
nhan manh (stressed)	—	**cuong dieu** (emphatic)

In terminology work, the problem of the systematic character of newly-coined words is also of primary importance. Chemical terminology for instance has a high degree of unity. Engels said in this connection : "In organic chemistry, the meaning of a body, that is its name, does not depend solely on its composition, but

rather on its position in the series it belongs to." (1). In this way the system of newly-coined words must work in such a way that the knowledge of any given word should make it possible to find its position in that system ; and conversely, knowing the place of a word in the system, we should be in a position to know this word.

Thus in the elaboration of terminology for each department of scientific knowledge, to avoid disorder and confusion, we always begin by collecting all the fundamental notions of the science concerned and find appropriate words for them. These words should be not only precise, but short and whenever possible, monosyllabic. Experience has shown that if words are monosyllabic, they will enable us to create a whole series of derivative words, all short and precise. Here we must try to avoid homonyms, for they would lead to a large number of homonyms among the derivative words, and the system of newly-coined words would lose its scientific precision. In mathematics for instance, the fundamental notions concern number, figure, function, root, variation, limit, etc... In biology, they concern phylum, class, order, family, genus, species, variety, etc.

When words have been created for the basic notions, we turn to the study of all other notions relating to these basic notions. Most of these relations have been already put in concrete form in the constitution of European scientific words. For example the prefixes anti —, mono —, proto —, inter —, or the suffixes — graphy, — metry, etc. have clearly defined meanings. The knowledge of these affixes will effectively help us to create scientific words of great unity. Thus we have :

don thuc	for	monomial
nhi thuc	—	binomial
tam thuc	—	trinomial
da thuc	—	polynomial
or **gian khop**	—	interarticular
gian bao	—	intercellular
gian suon	—	intercostal

(1) Marx and Engels, **Complete Works**, Vol. 14, p. 509 (Russian edition).

gian phat	—	intercurrent
gian thuy	—	interlobate
gian dot ban tay	—	intermetacarpal, etc...

In the third place, we go on to the formation of fixed clusters of words, chiefly of clusters of words composed of a noun already determined by the above-mentioned methods and a verb or an adjective associated with it. To find appropriate words for this verb or this adjective, we also apply the opposition process : we review all the verbs and adjectives the most in use in the science concerned and create a proper word for each of them, then we associate them with the noun according to the rules of Vietnamese grammar. Then we ensure a perfect unity for the newly-coined clusters of words as well as for the words created later from these coined clusters. For instance, the cluster of words **truyen phan** (pollinization) will enable us to form such derivative words as :

gio truyen phan	for	anemophilous
sau truyen phan	—	entomophilous
chim truyen phan	—	ornithophilous, etc.

Lastly, we coin words for the remaining notions, that is those which have not yet been included under the three above-mentioned rubrics. These words can either be borrowed from kindred sciences, or be proper to the science under consideration. With regard to the words belonging to kindred sciences, say, words of psychology and philosophy used in pedagogy, or words of biology or geography used in geology, we borrow them such as they are without coining new words. Thus we maintain unity not only within a given branch, but also in all the departments of scientific knowledge taken as a whole. Concerning the words proper to the science concerned, it goes without saying that we must create them on the basis of the above-mentioned principles of association of elements.

In all the cases of formation of words or clusters of words, we always see to it that the word thus coined is not too long : preference is given to short and precise words, easy to pronounce. To this end, we apply the method of contraction familiar to our tongue. Such clusters of words as **thanh danh** (renown) and **pham gia** (dignity), have since long been contracted into

danh gia (honour) ; **cham nom** (to attend to) and **san soc** (to take care of) into **cham soc** (to tend). At present contracted words like **ba xay ba chong** (three virtues to build up and three shortcomings to overcome), **bon tot** (four goods), **nam yeu** (five loves)... are also frequently employed.

With regard to terminology, the examples of contracted words are legion. Let us mention some, taken from the vocabulary of medicine :

Loan duong (contracted form of **roi loan dinh dưỡng)** to name dystrophy.

dieu nhiet (contracted form of **dieu hoa nhiet do)** to designate thermoregulation.

chu ky tieu sinh (contracted form of **chu ky tieu hoa sinh duc)** to name gonotrophic cycle, etc.

*
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Our work of building scientific words has scored notable successes, but there remain many problems, especially theoretical ones, to be solved. We must say that our terminologists and linguists have not yet come to complete agreement on some points. That is why our report deals only with the main results achieved in our work of terminology.

We should like to stress that, in our work, our main concern has been to make full use of the materials offered by our national language in the building of scientific words. We had first to wage an unflagging struggle against that inferiority complex, that underestimation of the people's language, deeply rooted in the minds of some persons who consider our mother tongue unfit to express precise scientific notions. To strengthen our people's confidence in the great possibilities offered by our mother tongue and our fine traditions, such is an indispensable condition for the completion of our work in terminology, which, in fact, is a revolutionary task. Without this confidence, one cannot tackle this work of building a scientific terminology in the national language. Only with clear patriotic conscience can one be sufficiently resolute to grapple with the work, and to

enrich the national language by creative and hardy means, in order to make it a rich and precise language capable of serving as a basis for scientific propagation and development.

In our work we have constantly been guided by the Workers' Party and President Ho Chi Minh. Our Party has unceasingly given us political education and strengthened our confidence in the great possibilities of our language; it has constantly helped and urged us to carry out scientific work including terminology. Particularly, President Ho Chi Minh is among the leaders who are the most resolute to enrich our language while preserving its purity and clearness.

It thus appears that without a stubborn struggle against the colonial system, new and old, without a just political line, without confidence in the possibilities offered by our mother tongue, and without clear patriotic conscience, we should not be able to carry through our terminology work, ennoble and enrich our national language so that it may become an efficient medium for scientific dissemination and development.

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WITH

THE PIONEERS

OF HOABINH

HA TRAN CUONG

The mountain regions of the D.R.V. cover three-quarters of the territory but are feebly populated, with numerous groups of ethnic minorities. The old feudal and colonial regime kept these regions in an unimaginable state of technical and cultural backwardness : practically the whole population was illiterate and farm techniques most rudimentary. Communications are still difficult. The development of education in these regions poses particular problems, which we do not intend to deal with in this issue. We will return to this subject later. To give some idea about an original formula which has been put into practice in the mountain regions, we give below a report by one of our correspondents on the School of Young Socialist Workers of Hoabinh province.

A river with its orchry stream, the Da — which some people I don't know why have called the Black River — , hill upon hill, some covered with thickets, others with manioc plants, stilted houses playing hide-and-seek behind the thickets, women dressed in long black or indigo skirts and tight embroidered blouses — here we are in the province of Hoabinh. We have left the plain to drive into the upland regions.

On Highway № 24, our car rolls comfortably as the roadway, though not asphalted, is large and well built, with well designed

curves and bridges in good repair. Do you remember that tale of Perrault's in which a traveller penetrating into a locality and driving around for miles, in reply to every question he posed, met with the same answer namely that everything there belonged to the Marquis of Carabas ? Driving along highway № 24, I find in this province of Hoabinh a new Marquis of Carabas.

Who has opened this road ? The School of Young Socialist Workers, I'm answered. Who has cleared these hills and planted these cassava plants ? The S.Y.S.W. Who is the owner of this horse that is strolling along peacefully without a conductor, with a load on its back ? The S.Y.S.W. Who are these people seen working on the hills ? Lads and lasses from the S.Y.S.W. I did not expect to find smokestacks in this region, yet there they are, of course not very tall and very big, but smokestacks all the same ! Then I scan the road leading to them : yes, the electric lines are there, too. Of course, this is not an industrial complex, but here, incontestably, one finds machines and electricity. A quite recent past is called up in my mind. Everywhere in the country, said the French geographer Gourou, you would look in vain for a single steam engine, a single dynamo operating a machine-tool in any village. Gourou was speaking of the delta which was much more advanced than the upland region. Here, not even the feudal stage had been reached : the plough, manuring and a written language were unknown things. Now, they are simply new things. Try to imagine my astonishment. Whom do these machines, this electric generator belong to ? I ask — The S.Y.S.W.

And here are houses standing in 6 groups in the middle of hundreds of hectares of manioc, 100 hectares of pine-apples, 300 of lacquer trees, hundreds of hectares of pasture-land on which more than 500 cattle and 200 goats (1) are grazing, and along the river, a long stretch of land where grow maize, beans and sugar cane. Let's not forget a 165-kw electric generator, a workshop producing tapioca and one producing vermicelli, a small distillery, an oil-press, in short everything that can turn to good account the agricultural production of this centre. Such is the estate of the S.Y.S.W.

(1) In Vietnam, these are important figures.

How to strengthen the Labour Youth Union at a time when the country was undergoing profound transformations, both economic and social? That was the question raised before the responsible cadres of this organisation in Hoabinh province in 1957. Three years had elapsed since the end of the war. Hoabinh, a mountain province, lagging behind the delta, had only very few schools, and illiteracy had not yet been liquidated. The peasants however had started forming mutual-aid teams, the beginning of agricultural co-operation. Administrative, technical and medical services at Central and provincial levels began to develop. The problem of training cadres was acute. Many cadres were filled with great enthusiasm and ready for any sacrifice, because they had served for a long time in the Resistance. But there was a serious gap in their training : some were still illiterate, most barely knew how to read and write. How was it possible in such conditions to transform the economic and social structures, and boost technical and cultural progress? When speaking of socialism, numbers of people shook their heads, saying : "It is good for the delta but not for the upland region ; here the mountains overwhelm us, the jungle squeezes us in its vice, the people are superstitious and not accustomed to intensive and regular work."

Moreover, the financial resources of the State were limited ; one could not build schools everywhere, for a scattered population, living far from major communication lines.

The solution to all these difficulties was to rely on the traditions of heroism and tenacity of the Vanguard Youth who had served the front during the war of national liberation ; for years, they had in innumerable columns transported on their backs the munitions and food supplies for the People's Army, carried the wounded, and opened roads under strafing and bombing by enemy aircraft. The provincial committee of the Party decided to establish schools of young socialist workers at which study would go along with production work, while production work would serve as a basis for theoretical studies and moral and ideological training and at the same time would finance the functioning of the schools. These schools would thus supply new cadres sprung from the mountain-dwelling minorities, possessing the necessary

knowledge, capable of working both with their brains and their hands and ready to serve the people. Responsibility for organizing such schools was entrusted to the Labour Youth organisation, and the first test was conducted with the section bearing the name of Cu Chinh Lan (1), which had served on the Dienbienphu battle-front. It comprised about 300 youth from various ethnic groups, most of whom had just learnt how to read and write.

The school opened its doors on April 1st, 1958. It signed a contract with State services for the construction of 6 kilometres of road and the repair of another 10 kilometres on Highway № 6. The students were chosen among members of the Labour Youth Union in the villages of the province, and grouped into sections, one per district, each section forming a class which was at the same time a production team. The school's leading body assigned to each section a definite task which was then shared out among the groups that composed it. All the leading cadres — both Party and Labour Youth cadres — took part in production, and so did the teaching personnel. Studies and productive work took 12 hours per day — 8 for work, 3 for class and 1 for personal study.

The school curriculum provided for :

— a general education course which was that of complementary education for adults ;
— an elementary technical course on road building and farm techniques ; and
— a political course which was that of basic organizations of the Party and the Labour Youth.

Some young men did not find the formula to their taste : they had thought that at school they would study with books and pen in hand all day long ; now that they were asked to do pick and shovel work they found it not worth while enrolling themselves in a school, and thought they might just as well remain at their villages. Furthermore, as they made a start in road building, labour productivity was not very high and so payments were poor ; the material situation at the start was far from brilliant. Dozens of young men, disheartened, gave up and returned home.

(1) a Hero of the People's Army.

The Party Committee of the province reinforced the leading body and launched a campaign for moral mobilisation. The following questions were raised for discussion among the students :

— Our country is endowed with rich natural resources, our people are industrious, yet we have been living in misery, why ?

— What has the Revolution brought us ? What must be done to build our future ? What contribution is to be made by the youth, particularly those of the highland nationalities ?

The problem of unity among various nationalities was also on the agenda. Following lively discussions, agreement was reached little by little on the objectives of the school and the methods of work. An emulation movement was started among different classes (which, mind, were also sections of the Labour Youth Union) under the slogan "Good study, good production work and close unity." Labour productivity increased rapidly, and the school was able not only to meet the students' needs and pay the teachers, but also to give some bounty to students who spent their holidays with their families.

After 9 months' work and study, all the students succeeded in passing two or three classes of the Ist (elementary) level (the first 4 years of general education followed by children of 7-11 years of age). Six were sent to attend a course on agricultural hydraulics ; the remainder returned to their villages to become activists in mutual-aid teams and agricultural co-operatives which were then being set up.

The experience drawn was turned to account the next year. On leaving school, the students were asked to submit a report on their activities to their village authorities ; thorough explanations were given to the youth who were to go back to school about the efforts which were expected of them. More than 300 students were retained. In 1959, the school participated in the building of an irrigation project serving 100 hectares of ricefields (a relatively important area for the mountain region). It also built a new stretch of road. Following the improvement on the standard of the students, history and geography were introduced into the programme of study. That year, as administrative and technical services in the province developed, a number of students of that

2nd batch were retained to follow improvement courses and later admitted to serve in different services. Three of them are at present following courses at the Hanoi University.

The 3rd and 4th batches also comprised nearly 400 students ; 100 students of the 3rd batch were retained at the school for additional study. A number of students began the programme of the 2nd level of general education (junior secondary). In 1960, the school signed a contract on the building of a 17-km stretch on Road № 24, with all the masonry works included in that section. In navvy-work and in the transport of materials, the students developed many initiatives to improve tools and increase productivity. In particular, shoulder-poles were completely replaced by sleds, wheel-barrows and carts. On an average productivity surpassed that at other building sites by 30%, bringing in a profit of several hundred thousand **dongs**, a precious capital for the school's future installations. As a matter of fact, in 1961, while the school was building Road № 24, it also made preparations for a new target : it was no longer a question of merely providing the students with a general education, but of training cadres and activists for the agricultural co-operatives already set up. By that year, the bulk of the local peasants had already joined the co-ops. The school should not limit its activities to building or repairing roads in order to finance its functioning, but productive work together with theoretical studies must now prepare the students for their future jobs as cadres of new co-operatives. Interest should be turned towards farm work. To this end, and also to improve their daily meals, the students, at the same time as they built Road № 24, reclaimed some one hundred hectares of land on which they grew manioc, sugar cane and vegetables, and raised about 200 pigs. By early 1962, the school was ready to follow the new orientation, in conformity with the economic plans of the State and the province. It settled at Yenmong village where it opened new land and became a big farm and at the same time a general education establishment and an agricultural cadres' training school.

Of the students trained in four years, from 1958 to 1961 :

— 890 returned to their villages to take part in renovation work ;

— 295 became workers at various technical and administrative services in the province ;

— 75 pursued their studies at supplementary education schools for workers and peasants and afterwards entered vocational or higher schools.

200 students of the first batch were retained to form the nucleus of the new school, henceforward settled at Yenmong and devoted to agricultural development. It was estimated that the school's activities in these 4 years had saved more than 600,000 **dongs** for State funds. For its part, the school had at the beginning of 1962 a capital of 350,000 **dongs** which enabled it to finance its new installations.

The first job was to open up new land by clearing jungle growth, and to build class-rooms and dwelling-houses. This was done not without difficulty.

> "Suddenly, the whole forest in which we were working were wrapped in black clouds ; darkness became almost complete. A confounded weather ! Two minutes later, a heavy rain poured down, drowning our conversations with its sound. We had to shout at the top of our voices to make ourselves heard. From time to time, a flash of lightning rent the darkness, followed by a deafening clap of thunder. We shivered with cold, some of us were even seized by fear. Anyhow, we were dripping wet like drowned rats. We agreed however not to return empty-handed. The rain continued pouring down, yet on we went with our bamboo cutting..."
>
> (Excerpts from a student's diary)

In this period, work was often done at night, by torch-light. More than 600 hectares of land had been reclaimed, and lodgings and class-rooms built of bamboo and wood, for the various students' groups : 5 groups for agricultural production, one for animal husbandry, and one for farm produce processing. Annual crops such as manioc, maize, sugar cane and pine-apples, and perennial plants and trees such as lacquer, **mangtang** (a kind of oil-bearing plant), etc. were grown.

But the problem was not merely one of growing crops for one's daily needs. Productive work was now closely integrated with studies ; each class was a production unit in which the students

learnt how to do manual work, to apply the knowledge they had acquired in class, and to manage collective work and group production. The students' general standard having much improved, classes of the 2nd level (junior secondary) were opened. On an average it took the students 3 months to finish a class of the 1st level and 5 or 6 months for a class of the 2nd level (attended in general education schools by children of the 11-14 age group). The programme was modified in accordance with the needs. Sixth and seventh-formers had 130 hours of chemistry and 200 of biology (including farm techniques). If in the first years of the school's existence, people having finished the 7th or 10th form of general education could be employed as teachers, with the gradual raising of the school's standard, more qualified teachers were required. The educational services of the province helped the school to recruit graduates from pedagogical schools and to set up small laboratories. The teaching of sciences was greatly facilitated by the opening of an "industrial complex". Manioc, beans, ground-nuts, manglang grain, transformed into flour, oil, paste, vermicelli, or alcohol, brought in much bigger returns than when sold unprocessed. But above all, their transformation on the spot constituted the most useful complement to theoretical studies. The provincial administration and the foreign trade services provided the school with a decisive aid by supplying it with the necessary equipment : electricity, flour mill... The oil-press and vermicelli-making apparatus were made by handicraft methods. A distillery making alcohol from manioc residues was set up on the spot. The school sent cadres and students to various factories and workshops to learn the necessary techniques. The sales of processed products helped make up for poor harvests due to natural calamities. A number of graduates have remained at the school as workers.

The raising of the school's standard required that more time should be given to studies, especially when the opening of classes of the 3rd level (senior secondary) was decided upon for the 1964-65 school year. The "part work, part study" principle was adopted, with one half-day reserved for productive work and the other for studies, i.e. from 5 to 6 hours daily for each of these purposes. The teaching cadres took part in productive work three

times a week, and so they could participate in the students' activities and introduce practical notions on both techniques and management into their teaching.

In 1964, about 200 students of the S.Y.S.W. were transferred to the Secondary School of Agriculture in the province to continue there their studies. The provincial administration plans to send to each village, towards the end of 1965, 2 agricultural technicians graduating from different schools.

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Hitherto we have talked about classes, school, electric generator, machines, chemistry and biology courses, etc... This may have called up in the reader's mind large buildings and learned and white-collared teachers. In fact, there are only modest bamboo houses with thatch roofs, tables and beds made of roughly-hewn boards and frugal meals for teachers and pupils clad in brown peasant clothing. On winter nights, the cold wind blows through the slits of disjointed partitions. Patches of manioc, and farther the thickets not yet cleared, form around classes and dormitories a green belt which shivers with the lightest breeze. We are far from the brick-built schools of Hanoi, with their comfortable furniture. Here, life is hard: it is the life of pioneers who are blazing a path to the future. Here, one has to struggle daily not only against the encroaching jungle, the heavy rainstorms and the wild boars which come to destroy the crops, but also against gloomy thoughts which are like rain clouds coming to darken a clear sky. For centuries, to be at school had meant to have no more to do with the plough and the hoe, to have only to set one's brain at work, to draw up plans and sign papers containing directives for manual workers who had had no chance of receiving an education. What is the use of going to school only to return to the village to till the fields? To go to school had also meant to spend a good many years acquiring knowledge, at the expense either of one's family or of the State. But now, one has to work with one's hands to build classes and pay the teachers, only to be again a peasant when one has finished school! Wouldn't it be better to stay at the village?

This daily struggle against one's own self has been, it can be asserted, crowned with success. The S.Y.S.W. has stood firm because it stands on three legs: productive work, study and constant political and ideological education. The school is at the same time a section of the Labour Youth Union. Its students are members of this organisation, — the "right arm" of the Party whose task is to forge men ready to serve the people and to endure everything in the interest of socialist construction. Here, political events are studied and commented on, and criticism and self-criticism is, as it were, part of the programme.

The Party tells the youth: to build our national economy we must rely above all on our own resources, we must dare to develop initiatives and dare to do. The youth of the S.Y.S.W. have followed these principles to the letter. At the tapioca workshop, at the distillery and in the laboratories, I asked the young assistant chemists: "From what professional school have you graduated?" — "Right from here. Then we visited factories, workshops and laboratories; everywhere we looked and asked questions; we bought books; and back to the school, we set to work. After many trials and errors, we have succeeded." This reply is typical of the spirit prevalent at the S.Y.S.W. Supported by high political consciousness, the youth do not shrink from difficulties.

The veterans, who are now in the School leadership, had carried munitions and food supplies on the roads leading to Dien Bien Phu. Under the Party's leadership, they have got other youth to join them in building their school, and clearing the land with their own hands; they have learnt by themselves how to operate machines and manage their vast estate. When they show the lands they have reclaimed and the classes they have set up, and when they relate the trials they have gone through, their eyes shine with pride and their voice trembles with emotion.

> "I am now very far away, but I have always kept in my mind the image of the hills of manioc and pine-apples which we have grown. I hear your voice no more but how can I forget the moments we have spent together at the school."

These words were written by Bui Thi Ngan, a former student, to her teacher, Miss Bich, who showed us the letter, not without

a smile of satisfaction. Bich finished the 10th form of general education in Hanoi in 1959. In response to the call of the Labour Youth Union which exhorted the youth to go and participate in economic and cultural development work in the uplands, she offered her services as teacher at the S.Y.S.W. This caused bewilderment to her family: why should a frail young girl of Hanoi ask to go to that malaria-infested mountain region! Her family did not know that under the new regime, malaria was disappearing and frail young girls were becoming valiant pioneers in Labour Youth Sections.

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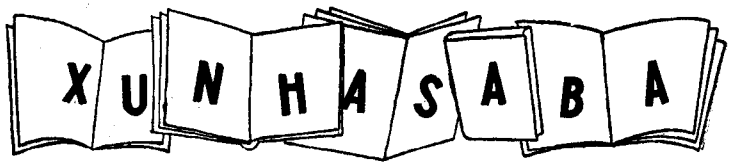
The S.Y.S.W. has blazed the path. A new formula has come into being and is now being widely applied in the mountain regions of the D.R.V.: schools in which the youth combine study with production. Almost every district of the uplands now has a school of this type, on a smaller scale however than that of Hoabinh. Each of these schools comprises on an average some one hundred youth of from 16 to 22, entrusted with the reclamation and development of dozens of hectares of land. Their time is equally divided between studies and farm work, and as in Hoabinh, education rests upon three "legs": general education, production work and political and ideological education. In general, these schools are financially self-sufficient. They group under their roofs the youth of different upland nationalities. Every year, thousands of youth leave these schools to work actively for the progress of the remotest regions. Without doubt, the organisation, like the programmes of study in these schools will undergo important modifications following the great changes taking place in the life of these regions. But in any event, the Hoabinh youth have initiated a formula which has marked a date in the history of education in Vietnam, and whose principle will certainly remain in honour at all times.



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