

performance of those pupils who have properly attended school but who have failed to acquire basic knowledge or skills.

Table 1.1.3.1 Retention Rates at the Primary Education, 1991

Year	Grade	Total Retained		Urban		Rural	
		Number	(%)	Number	(%)	Number	(%)
1986	1st Grade	141,793	-	49,021	-	92,772	-
1987	2nd Grade	122,123	86.1	49,005	100.0	73,118	78.8
1988	3rd Grade	111,369	78.5	48,148	98.2	63,221	68.1
1989	4th Grade	96,545	68.1	44,834	91.2	51,711	55.7
1990	5th Grade	82,900	58.5	41,762	85.2	41,138	44.3
1991	6th Grade	71,778	50.6	38,215	78.0	33,563	36.2

Source: Anuario 1991, Desarrollo Educativo en Cifras, MEC

Table 1.1.3.2 Retention Rates at the Secondary Education

	1972 - 1976	1976 - 1981	1981 - 1986	1986 - 1991
Nos. of Students Enrolled	16,622	22,820	33,581	35,484
Nos. of Students Retained	7,466	11,835	15,668	15,793
Retention Rate	44.9	51.9	46.7	44.5

Source: Anuario 1976, 1981, 1986, 1991, Desarrollo Educativo en Cifras, MEC

- (b) The educational problems in terms of quality are attributed to insufficient teaching materials and educational facilities, etc. The inadequate functioning of the educational system in Paraguay is partially caused by a shortage in the absolute number of teachers. In addition, many teachers do not have the proper qualifications. It is, therefore, imperative to consolidate the teacher retraining scheme in addition to increasing the number of teachers.

Table 1.1.3.3 Number of Teachers and Shortage at the Primary Education

	Teaching Posts	Number of Teachers	Shortage of Teachers	%
Licensed	23,589	14,514	9,075	38.5%
Non-licensed	8,313	4,462	3,851	46.3%
Total	31,902	18,976	12,926	40.5%

Source: Memoria, 1991, Departamento Enseñanza Primaria, MEC

(c) Literacy education and adult education should also be given high priority. The number of illiterate in Paraguay was some 380,000 in 1982. Even now, the number of illiterate is estimated to be fairly high if the functional illiterate who are not identified in illiteracy statistics are included. Rectification of the illiteracy gap between urban and rural areas and the provision of education which is designed to endow the illiterate with reading and writing ability, basic knowledge at the primary level and practical skills are urgently required.

Table 1.1.3.4 Population Aged 15-years or more, Illiterate Population and Illiteracy Rate by Department, 1982

Department	Population aged 15 year or more	Illiteracy	
		Population	Rate (%)
Asunción	323,241	22,431	6.9
1. Concepción	69,920	20,188	28.9
2. San Pedro	97,965	27,417	28.0
3. Cordillera	112,805	25,958	23.0
4. Guaira	82,834	24,576	29.7
5. Caaguazú	160,319	42,418	26.5
6. Caazapa	58,235	19,796	34.0
7. Itapua	145,273	39,107	26.9
8. Misiones	43,916	12,290	28.0
9. Paraguari	118,363	30,739	26.0
10. Alto Parana	110,903	27,028	24.4
11. Central	317,570	44,189	16.9
12. Ñeembucu	42,072	12,248	29.1
13. Amambay	39,018	10,229	26.2
14. Canindeyu	36,192	14,639	40.4
Occidental Departments	34,980	7,133	20.4
Total	1,793,606	380,386	21.2

Source: Censo Nacional de Población y Viviendas, 1982

(d) Some 7% of Paraguay's economically active population has never received any form of school education. In addition, 46% of primary school pupils failed to complete primary education in 1982. The provision of wider opportunities to receive a basic education for these young people and adults who occupy socially inferior positions or who

are unable to complete the minimum education due to the lack of proper educational opportunities is extremely important.

Table 1.1.3.5 Level of Education of Economically Active Population

No Education	Primary Level				Secondary			University Graduate			Not Specify	Total		
	1-2 years	3-5 years	6 years	no Information	6 years	no Information	Total	3-4 years	5-6 years	Total				
Population	76,479	104,939	322,107	207,102	53,974	688,122	59,825	27,281	216,899	4,817	14,385	38,825	18,933	1,039,258
%	7%	10%	31%	20%	5%	66%	6%	3%	21%	0%	1%	4%	2%	100%

Source: Censo Nacional de Población y Viviendas, 1982

(e) Basic education is not only a final target to be achieved but is also the gateway to all other types of education, consolidating the base for the development of human resources. Diversified further education (secondary, higher or vocational) is only feasible when the foundations are firmly provided by basic education.

(f) Given the prospect of an increased school population in the future, an adequate level of educational expenditure must be secured by the Government in order to expand educational services to meet the increased demand for education. In addition, efficiency should be improved in all levels of education.

(2) Existing Educational Development Programs

1) Government Policy on Education stipulated in Existing National Development Plan

The new government formed in February, 1989 does not have an official economic development plan which has been authorized by parliament. However, it has prepared macroeconomics policy guidelines to act as the framework for development plan preparation. The guidelines were notified to all ministries and agencies in June, 1991.

The guidelines stipulate that any new economic development plan to be prepared in the future must aim at achieving sustainable economic and social development and improvement of national life while fully reflecting popular opinion under the newly established democracy. Minimum but

adequate government intervention is called for as the basic strategy while encouraging the active participation of the public to make the plan fully reflect popular opinion and promoting the active involvement of the private sector. The guidelines also stipulate basic policies in such crucial sectors as agriculture, industry, investment, export, transport and energy.

The basic policies in regard to social development include the promotion of housing development by both the public and private sectors and the strong encouragement of government-led education and public health programs to improve the currently low standards of education and public health.

2) Educational Development Program of the MEC (1991-1993)

The Educational Planning Department of the MEC prepared the Educational Development Program (EDP) in May, 1991 for the period between 1991 and 1993.

The EDP gives general guidelines vis-a-vis various organizations and institutions engaged in the provision of national education. These guidelines are designed to urgently address the educational problems pointed out by the educational diagnosis in 1989 while taking national development policies into consideration.

Past programs designed to enlarge the quantitative aspect of education are positively valued by the EDP in view of the need and demand for education at the national development stage of Paraguay. However, the EDP points out that a qualitative improvement of education is necessary for the future. The main findings of the EDP are outlined below.

- (a) Positive achievements have been made in terms of the quantitative enlargement of education, expanded educational opportunities and expanded scope of education through an increased enrollment rate and diversified curricula, etc.

- (b) The social demands for education have become more diverse and complicated because of the development of science and technology. Educational standards must be fundamentally upgraded to support the economic, social and cultural development of Paraguay in the future, necessitating an urgent review of such elements of education as curricula, guidance methods and education management, etc. This review is necessary to both rationalize and modernize the entire educational system of the country in order to create the excellent human resources required for the country's development.

The educational themes for each stage of education are shown in Table 1.1.3.6.

Table 1.1.3.6 Educational Themes by Educational Stage

Primary Education	<ul style="list-style-type: none"> - 100% school attendance rate and higher efficiency - Correction of the educational gap between urban areas and rural areas - Improved teaching ability of teachers
Secondary Education	<ul style="list-style-type: none"> - Increased sense of social responsibility and improvement of the human sense of integrity - Improved basic vocational training capability essential for agricultural and industrial development throughout the country - Nationwide development of the human resources essential for national development, including agricultural development
Teacher Training	<ul style="list-style-type: none"> - Improved teaching ability of current teachers, particularly that of primary school teachers - Fostering of teachers in response to the diverse requirements for secondary and vocational education - Improved teacher training system, taking new developments in science and technology and the trends of national socioeconomic policies into consideration
Literacy Education and Adult Education	<ul style="list-style-type: none"> - Contribution to productive labour force and society (acquisition of basic vocational training capability) - Expansion of educational opportunities - Fostering of the required specialists - Development and introduction of effective training systems
Special Education	<ul style="list-style-type: none"> - Introduction of a carefully prepared educational system designed to meet the special needs associated with different types of handicaps - Development and introduction of a program designed to emphasize basic vocational training

1.1.4 Basic Policies of Educational TV Utilization Plan

The following basic policies for making the educational utilization plan are introduced taking educational characteristics of television as well as educational conditions in Paraguay into consideration.

- (a) The school education and social education activities of the Government should be effectively and efficiently promoted using the characteristics of educational TV broadcasting.
- (b) As the country's human resource development or consolidation should be conducted on the basis of appropriate measures and policies vis-a-vis the development stage of the country, the contents of educational TV broadcasting must also correspond to the development stage.
- (c) The objective areas of educational broadcasting coverage under the Master Plan should be selected based on the socioeconomic conditions of such areas. The Master Plan should be implemented stage by stage and priority areas should be selected on the basis of appropriate conditions.
- (d) The realization of effective and efficient education is an urgent task for Paraguay and the national network for educational TV broadcasting should be established as soon as possible. There are many requirements, such as establishment of an appropriate organization and the training of staff, as Master Plan is the first full-scale plan of its kind for the Government of Paraguay. In view of such requirements, a significant preparation period should be allowed prior to the commencement of the full-scale broadcasting services in order to fully realize the objectives of the Master Plan.

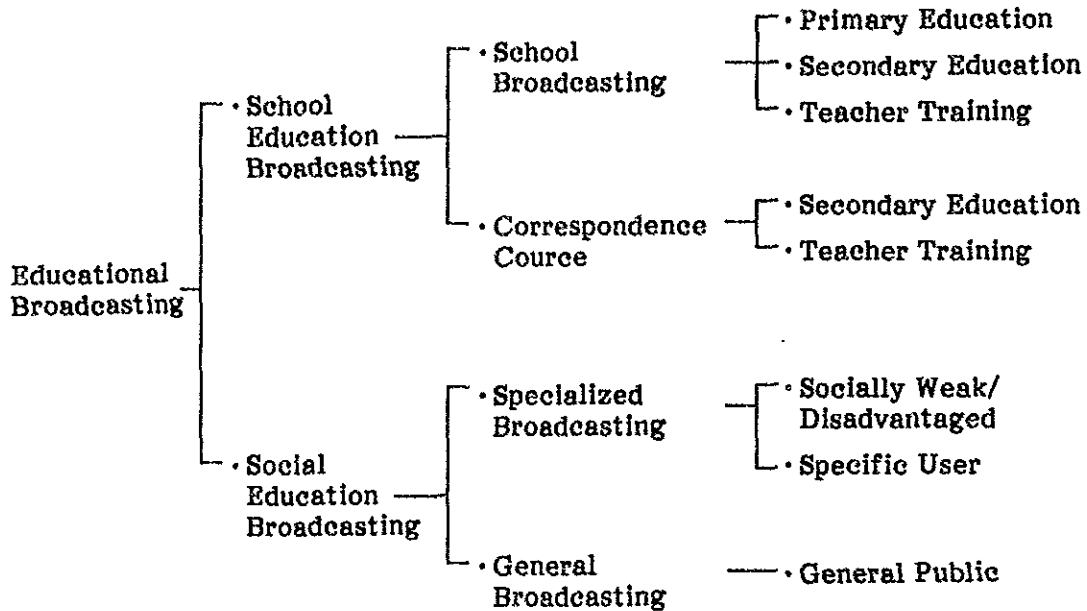
1.1.5 Objectives and Targets of Educational TV Broadcasting

The main objectives of the educational broadcasting are to support improvement of existing school education and to diffuse and expand social education to all children, young people and adults who cannot or could not complete the primary education. The targets with a priority to achieve such objectives is described below.

- (a) The educational broadcasting will consist of school broadcasting to improve and consolidate school education and social education broadcasting to diffuse and expand social education.
- (b) The priority objectives of the educational TV broadcasting plan are (i) the qualitative improvement and consolidation of basic education and (ii) the diffusion and strengthening of social education for the socially weak or disadvantaged and for the general public.
- (c) Both school broadcasting and correspondence course will be used for the training of new teachers to ease the teacher shortage and also to improve the effects of the retraining of existing teachers so as to improve school education.
- (d) In the secondary level education, priority will be placed on basic secondary education and improving quality with diversified programs. Correspondence courses for the secondary level education will mainly be considered for those who want to but cannot attend school.
- (e) The learning requirements of young children, young people and adults are characterized by diversity, complexity and a changing nature. Educational broadcasting should, therefore, provide the opportunity to satisfy individual learning requirements which may be academic or technical, making the best use of the characteristics of broadcasting.
- (f) Educational TV broadcasting will assist many general public to acquire the knowledge and/or skill to improve their standard of living and to spend a healthy civic life.

The overall educational TV broadcasting scheme of the Master Plan is shown in Figure 1.1.5.1.

Figure 1.1.5.1 Overall Educational Broadcasting Scheme



1.1.6 Development Scenario

As earlier discussed in the previous section, i.e. "basic policies", the educational objectives cannot be permanently fixed and they shall be reviewed and revised from time to time to reflect the stage of social and economic development of the country. The Master Plan emphasizes that the missions and contents of the proposed educational TV broadcasting must evolve in accordance with changes over time while trying to incorporate in the Master Plan as much as possible likely social and economic conditions in the future.

Based on this recognition, in making the development scenario, a kind of phased development plan with intermediate targets was prepared in order to fully achieve the objectives of the Master Plan, taking the priority educational issues and their target levels into consideration.

(1) Short-term Targets

What should be given priority in such a phased development plan is the improvement of basic education and the fulfillment of the basic educational needs of the general public to ensure fair educational opportunities for all.

Therefore the priority objectives of the educational TV broadcasting plan are;

- 1) the qualitative improvement and consolidation at primary education,
- 2) teacher training and re-training which are imperative to achieving 1) above, and
- 3) diffusion and strengthening of social education for the socially weak and for the general public.

(2) Medium-term Targets

In addition to the expansion of basic education, the expansion of secondary level education which will have higher economic profits must be the main future target of the educational development taking the following conditions into consideration.

- i) High enrollment rates are predicted in the future at the secondary education in line with the expansion and improvement of the primary education.
- ii) At present, Paraguay's economy is largely dependent on agriculture. According to the macroeconomics policy guidelines (1991, Planning Agency), the Government intends to maintain the policy of promoting the growth of primary industry on the basis that primary industry must be given priority in national development.
- iii) With commencement of the MERCOSUR in 1991, Paraguay will maintain its policy of firmly supporting the growth of the primary industry while trying to establish an industrial structure which is competitive in regional and international markets through diversification mainly geared to the fostering of agriculture-related industries.

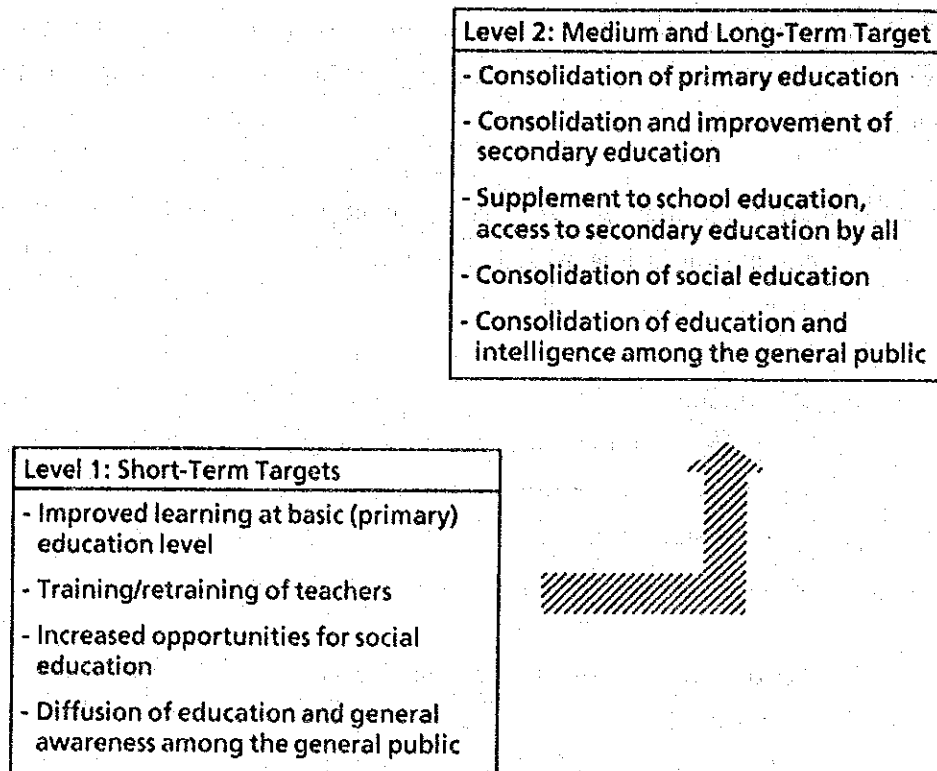
The above development policies naturally call for a better advanced work force which can directly respond to the industrial and agro-industrial development in the national economy.

(3) Long-term Targets

Furthermore, it is anticipated that the requirements for wider educational opportunities or life-long learning will gradually intensify following the fulfillment of basic educational demands.

It will therefore be necessary to redefine the themes and systems of educational TV broadcasting to include new elements and educational systems in accordance with qualitative and quantitative changes of the educational requirements. Figure 1.1.6.1 shows the conceptual target levels of educational TV broadcasting throughout the extent of this Master Plan.

Figure 1.1.6.1 Target Level of Educational Broadcasting



As pointed out before, the Master Plan will be of a phased and developmental nature to ensure the achievement of its ultimate targets, which can be achieved by implementing all the programs mentioned above.

Much effort over a long period of time is essential to achieve such objectives of the Master Plan. Momentum can be sustained by clarifying the stage of progress towards the completion of the ultimate targets. Table 1.1.6.2 shows development frame of the Master Plan, base on the above-mentioned recognition.

Table 1.1.6.1 Educational Broadcasting Development Frame

Objective	Target	User Unit	Educational TV Broadcasting			Educational Culture
			Primary	Secondary	Higher	
I School Education Broadcasting	(1) School broadcasting	Pupil Student	School	●	⊙○	
		Teacher Student	School			●
	(2) Correspon- dence Courses	Student General public	Individual Person		○	
		Teacher	Individual Person			●
II Social Education Broadcasting	(1) Social Broadcasting	Socially Weak	Small Group/ Classroom			●⊙○
		Specific Users	Individual Person			○
	(2) General Braodcasting	General Public	Individual Person/ Household			●

● Short-term Program ⊙ Medium-term Program ○ Long-term Program

1.1.7 Program List

The Master Plan envisages short-term, medium-term and long-term programs as shown in Table 1.1.7.1 Each program is outlined in Table 1.1.7.2.

Table 1.1.7.1 Program List

(Short-Term Program)

Program Name	Target	User Unit
- School Broadcasting Program for Primary Education	Primary School Pupils	School
- Teacher Training Broadcasting Program	Students/Teachers	School
- Correspondence Courses Program for Teacher Training	Students/Teachers	Individual Person
- Educational Broadcasting Program for Socially Weak (Phase 1)	Socially Weak	Classroom/ Small Group
- Educational and Cultural Broadcasting Program for General Public	General Public	Individual Person/Household

(Medium-Term Program)

Program Name	Target	User Unit
- School Broadcasting Program for Secondary Education (Phase 1)	Secondary School Pupils	School
- Educational Broadcasting Program for Socially Weak (Phase 2)	Socially Weak	Classroom/ Small Group

(Long-Term Program)

Program Name	Target	User Unit
- School Broadcasting Program for Secondary Education (Phase 2)	Secondary School Pupils	School
- Correspondence Courses Program for Secondary Education	Secondary School Age Children/Adults	Individual Person
- Educational Broadcasting Program for Socially Weak (Phase 3)	Socially Weak	Classroom/ Small Group
- Educational Broadcasting Program for Specific Learning	Specific Learners	Individual Person

Table 1.1.7.2 Description of Program

Program Name	Objective(s)	Target	User Unit	Operation System	Conditions
School Broadcasting Program for Primary Education	<ol style="list-style-type: none"> To supplement the shortage of teachers, teaching materials, etc., in the current classrooms in order to improve and consolidate the learning process; To standardize teaching methods and to reduce repeaters and consequently drop-outs which is a serious problem in primary education today; To improve learning through the use of audio-visual materials, which can rarely be used for ordinary teaching in classrooms. 	Primary School Pupils	School	Systematic implementation based on school curricula	Consolidation of physical and human resources; adjustment between school hours and broadcasting hours
Teacher Training Broadcasting Program	Insufficient functioning of the present education system is partly caused by a shortage of teachers, coupled with the fact that many of the existing teachers are not properly qualified; To train high quality teachers and to improve the quality of education.	Students/Teachers	School	<ul style="list-style-type: none"> All aspects of education being taken up in accordance with the teacher training program to train teachers Learning of new teaching methods using television In principle, the use of recorded materials instead of real-time broadcasting 	Compatibility between learning through broadcasting and classroom learning necessary to ensure the proper achievement of the former by means of a certificate, and decrease the latter hours, for example
Correspondence Courses Program for Teacher Training	Provision of distance education through television for the training and retraining of teachers.	Students/Teachers	Individual Person	Integration to teacher training program	<ul style="list-style-type: none"> Promotion of video use to facilitate diversified, effective teaching
School Broadcasting Program for Secondary Education	<ol style="list-style-type: none"> To supplement the shortage of teachers, and teaching materials, etc., in the current classrooms to improve and consolidate the learning process; To standardize teaching methods and to reduce the high level of drop-outs which is a serious problem in secondary education today; To improve learning through the use of educational materials, which can hardly be used for ordinary classroom teaching, in the future. 	Secondary School Pupils	School	<ul style="list-style-type: none"> Selective use of specific programs which fully exploit the characteristics of television broadcasting even if these are not fully compatible with the curricula Diversified use of broadcast programs by means of VCR Creation of integrated secondary education system together with radio programs 	
Correspondence Courses Program for Secondary Education	<ol style="list-style-type: none"> To provide correspondence education for those who want to but cannot attend school; To provide secondary education in remote areas; The program is useful for secondary school pupils to improve their academic level. 	Individual Persons/Secondary School Pupils	Individual Person	Combination of viewing at home and classroom teaching at school <div style="text-align: center;"> <pre> graph TD A[Correspondence Course] --> B[Learner] B --> C[Schooling] C --> D[Schooling Report] D --> A </pre> </div>	<ul style="list-style-type: none"> Preparation of textbooks Development of an achievement or evaluation system Establishment of responsible department in MEC
Social Educational Broadcasting Program for socially weak	<ol style="list-style-type: none"> To satisfy the basic educational requirements of the socially weak, such as infants, children of school age but not attending school, the illiterate, the handicapped and the poor, etc.; To encourage the wide participation of these people in basic social education organized by a local community or group while rectifying the unequal educational opportunities; Similar to general educational and cultural broadcasting once fully developed. 	Socially Weak including the illiterate	Group/Individual Person	<ul style="list-style-type: none"> Phase 1: to satisfy the most basic learning requirements - literacy education and education for infants Phase 2: to provide basic training to foster the abilities and knowledge essential for social life Phase 3: to promote programs designed to provide essential information on social activities or problems 	<ul style="list-style-type: none"> Strong assistance by family members and/or community Possible joint activity with literacy organization Provision of program leaflets and annual schedule, etc., to allow the public to know the contents in advance
Social Educational Broadcasting Program for Specific Learning	To meet the learning requirements of individual persons or groups hoping to acquire the knowledge and/or skills for a better social life and productivity in industries (languages and vocational training, etc.).	Specific Users	Individual Person	Home learning to meet the specific requirements of individual learners	Promotion of popularity through the provision of leaflets explaining programs and annual schedule, etc.

Table 1.1.7.2 Description of Program

Program Name	Objective(s)	Target	User Unit	Operation System	Conditions
Educational and Cultural Broadcasting Program for General Public	① To use television broadcasting to make the general public acquire knowledge, skills and a sense of values for a better life and/or for the sound sustainable development of personal potential; ② To provide information on nutrition, health, jobs and social events, etc.; ③ To conserve the cultural heritage of the country through various programs; ④ Programs for women or for the promotion of democratic principles in daily life will be significant.	General Public	Individual Person/ Household	Individual, family or group viewing to improve social consciousness as well as practical knowledge	- Promotion of joint viewing by parents and children to develop sound viewing habits - Advance announcement of programs and annual schedule, etc., to make the public aware of the program contents in advance

1.2 Educational TV Network Development Program

1.2.1 Basic Planning Policies

The Master Plan, the target year of which is 2010, has intermediate goals to achieve its overall objectives as it is believed that continual stage-by-stage development efforts are essential for its ultimate success. The following principles are essential for the successful planning.

- (a) Feasibility
 - Emphasis on harmony and continuity with the existing educational system
 - Financially feasible size
- (b) Stage-by-stage implementation of the program while carefully monitoring its progress.

1.2.2 Objective Areas and Priority Areas

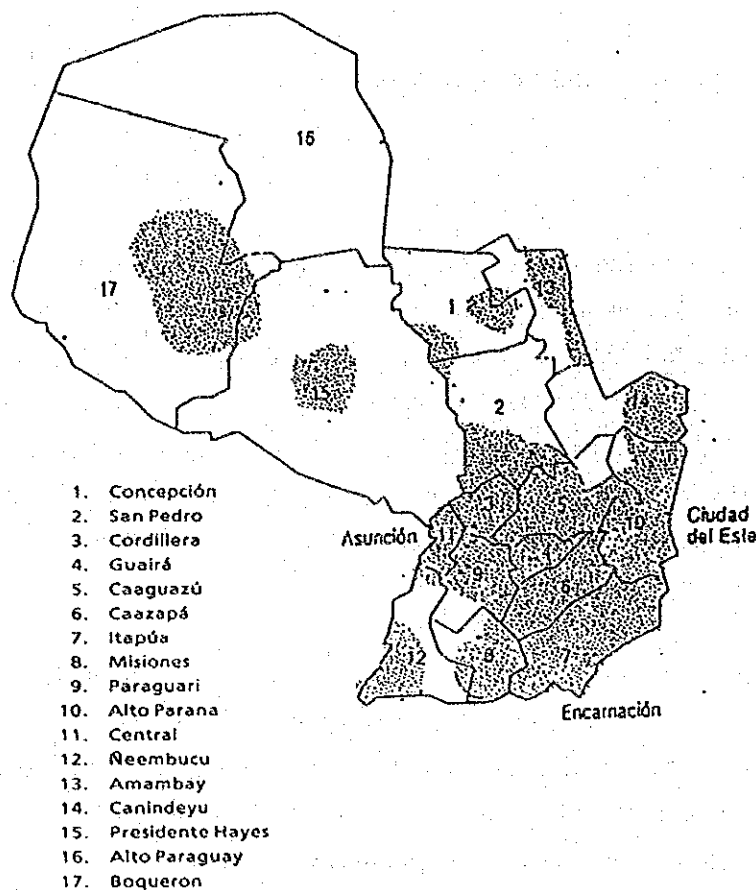
(1) Objective Areas

The national land of Paraguay is divided into the eastern part and the western part by Rio Paraguay. The population is predominantly concentrated in the eastern part (slightly less than 98%) which enjoys a more advanced stage of development. The western part accounts for some 61% of the national land and has a population of slightly more than 2% of the national population. It mainly consists of flat grassland and bush land which can be used for stock raising purposes. The population density is 25 persons/km² in the eastern part and 0.4 person/km² in the western part.

From the viewpoint of maximizing the size of the benefiting population, the objective areas to be covered by proposed broadcasting network under this Master Plan are the major cities and their surrounding areas in the eastern part of Paraguay. Coverage of this part will achieve a broadcasting coverage ratio of more than 90% vis-a-vis the total population in 1992.

As the population of the western part of Paraguay is only 97,210 as of 1992, total coverage of this part by TV broadcasting would only serve 2% of Paraguay's total population. While the long-term forecast of the Statistics and Census Bureau of the Planning Agency anticipates a population increase of 100,000 in the western part, the population ratio will remain almost the same as the present ratio. The impact of investment in the TV broadcasting network by covering the huge western part of Paraguay which has a very small population would be absolutely minimal. As far as the western part, therefore, it appears more practical to use the microwave communication network of the ANTELCO by establishing relay stations at relatively populated areas of Filadelfia, Poso Colorado and M. Estigarribia to cover the surrounding areas. This additional broadcasting coverage in the western part will increase the population coverage ratio by 1.4 points.

Figure 1.2.2.1 Objective Areas



(2) Priority Areas

1) Selection

It would be impractical to establish such a broadcasting network as to cover the whole objective areas simultaneously. It was therefore planned to establish the broadcasting network step by step to cover the objective areas, i.e. to cover the above-mentioned objective areas gradually throughout the extent of the Master Plan. An examination was conducted on the priority areas where the establishment of broadcasting network is to be hastened.

The following conditions have been taken into consideration in selection of priority areas.

- (a) Consideration of the number of beneficiaries
- (b) From the educational point of view, priority should be given to those areas where the basic learning skill level of the population is generally low and where there are few educational opportunities. The low educational standard in certain areas can be assumed to be the result of poor transport, economic and cultural conditions. There is little regional difference in terms of such educational indices as the school enrollemnt rate and illiteracy rate, except those of Central Department and Asuncion, the capital of Paraguay, far exceeds the national average.
- (c) From the social point of view, the impact of broadcasting from neighboring Brazil and Argentina is very strong on people living in border areas. The Government of Paraguay is seriously concerned with protecting the local cultural, spiritual and linguistic heritage of these areas. The necessity to provide education at new settlements should be carefully considered to facilitate the establishment of firm settlements in line with the government policy of encouraging small-scale farmers to move to new areas to establish new settlements.

- (d) The MEC upholds the decentralization of education as one of the priority measures for educational reform. This decentralization intends the restructuring of the educational system to reflect the geographical conditions, potential and infrastructure of each locality to improve the efficiency of education. The county is divided into 8 educational regions and the existing CREs are expected to act as the operation base for each region. The functions or roles to be played by the CREs in the field of educational development will be influential not only in regard to school education but also in terms of the much wider context of social education.

As the full utilization of the functions and roles of the CREs is believed to be crucial to guaranteeing the positive effects of educational broadcasting, the locations of the CREs have been taken into consideration in the selection of priority areas.

Table 1.2.2.1 Regional Education Centers (CRE)

Department	C.R.E
1) Central	CRE San Lorenzo
2) Itapua	CRE Encarnacion
3) Guaira	CRE Villarrica
4) Alto Parana	CRE Ciudad del Este
5) Concepcion	CRE Concepcion
6) Amambay	CRE Pedro Juan Caballero
7) Neembucu	CRE Pillar

Source: MEC

- (e) From the viewpoint of transmitting programs on the broadcasting network, the availability of the ANTELCO's telecommunication network (microwave network) has been taken into consideration as this appears at present to be the most suitable and realistic means of transmitting programs to local stations. The ANTELCO plans to digitalise the network in the following manner.

- Section between Asuncion, Encarnacion and Ciudad del Este (service to commence in 1993)
- Section between Ciudad del Este and Saltos del Guaira (to be completed in 1994)
- Section between Asuncion and Meal. Estigarribia (to be completed in 1997)
- Other sections (to be completed in 2002)

As a result of the above-stated considerations, it was decided that the priority areas to be covered by the proposed broadcasting network plan are Asuncion, the capital of Paraguay, and such cities as Villarrica (Guaira), Ciudad del Este (Alto Parana) and Encarnacion (Itapua). Actual broadcasting would cover the whole of these cities and their surrounding areas. Table 1.2.2.2 provides the coverage of the priority areas by department and district.

Table 1.2.2.2 Coverage of Priority Areas (Departments and Districts)

Department	District	Department	District
Asuncion		Paraguari	Escobar
Cordillera	Eusebio Ayala Valenzuela Nueva Colombia Altos San Bernardino Caacupe Embosoada Atyara Arroyo y Esteros		Sapucal Caballero Vbytimi Mbuyapey Pirayu Yaguaron Acahay Carapegua Quindy S. R. G de Sta. Cruz
Guaira	Villarrica Independencia C. M. J. Troche Mbocayaty Cnel. Martinez Itape Borja Iturbe San salvador Numi	Alto Parana	Ciudad del Este Hernandarias Minga guazu S. R. del Monday Los Cedrales Pte. Franco Vguazu
Caaguazu	Caaguazu Repartriacion Dr. J. M. Frutos Carayao Cnel. Ovideo S. J. de los Arroyos Dr. J. E. Estrigarribia Yhu Dr. Cecillo baez	Central	Mariano Roque Alonso Limpio Luque Aregua Fernando de la Mora San Lorenzo Capiata Itagua Ypacarai J. A. Saldivar Ita Guarambare Ypane Nemby Nueva Italia San Antonio Villa Elisa Villeta Lambare
Caazapa	Caazapa Fulgenio Yegro		
Itapua	Cap. Miranda Encarnacion Cambyreta Nueva Alborada Bella Vista Obligado Hohenau Trinidad Pirapo Jesus Fram Gral. Delgado Cnel. Bogado Carmen del Parana San Cosmey y Damian Cap. Meza Gral. Artigas	Pte. Hayes	Benjamin Aceval Villa Hayes

2) Population and Major Educational Facilities in Priority Areas

a) Population

The broadcasting is expected to cover 88 districts in the priority areas and the covered population is approximately 2.5 million, making the rate of population coverage by the planned broadcasting some 62% in 1992.

The population in the priority areas by department is as shown in Table 1.2.2.3.

Table 1.2.2.3 Population Coverage of Educational TV Broadcasting (1992)

Department	Urban	Rural	Total
Asuncion	502,426	0	502,426
Corillera	40,249	93,635	133,884
Guaira	39,596	89,084	128,680
Caaguazu	96,602	155,411	252,013
Caazapa	4,798	21,744	26,542
Itapua	89,802	104,188	193,990
Paraguari	26,935	110,125	137,060
Alto Parana	209,617	71,950	281,567
Central	688,614	175,926	864,540
Pte. Hayes	18,046	16,582	34,628
Total	1,716,685	838,645	2,555,330

b) Major Educational Facilities

- i) The number of primary schools and pupils in the priority areas as of 1992 is provided in Table 1.2.2.4

Table 1.2.2.4 Number of Primary Schools and Pupils in Priority Areas (1992)

Department	Enrollment			School		
	Urban	Rural	Total	Urban	Rural	Total
1 Asuncion	89,930	0	89,930	273	0	273
2 Cordillera	10,648	16,039	26,687	28	123	151
3 Guaira	9,150	8,709	17,859	28	87	115
4 Caaguazu	19,539	44,271	63,810	46	351	397
5 Caazapa	1,152	4,614	5,766	6	47	53
6 Itapua	17,118	16,836	33,954	53	211	264
7 Paraguari	8,389	20,733	29,122	26	196	222
8 Alto Parana	35,700	13,168	48,868	118	106	224
9 Genral	83,526	57,240	140,766	207	200	407
10 Pte. Hayes	5,276	2,676	7,952	21	62	83
Total	280,428	184,286	464,714	806	1,383	2,189

Source: MEC

- ii) The teacher training institutions, number of the students at each institution and the number of incumbent teachers by qualification in the priority areas are shown in Tables 1.2.2.5 and 1.2.2.6.

Table 1.2.2.5 Teacher Training Institutions and Number of Students in Priority Areas (1992)

Department	Name of Institution	Pre-Primary School Course	Primary School Course	Secondary School Course	Post-Graduate Course	Total
Asuncion	ISE Dr. Raul Pena	157	425	754	91	1,427
Central	CRE San lorenzo		227			227
Itapua	CRE Encarnacion		129	76		205
Guaira	CRE Villarrica		196	52		148
Alto Parana	CRE Ciudad del Este	51	124	16		191
Asuncion	IFD Ntr. Senora de la Asuncion		153			153
Asuncion	IFD Maria Auxiliadora		60			60
Cordillera	IFD Eusebio Ayala		213			213
Caaguazu	IFD Cnel. Oviedo		218			218
Caazapa	IFD Caazapa		77			77
Paraguari	IFD Paraguari		234	44		278
Caaguazu	IFD Caaguazu		121			121
Itapua	CRE Gnel. Bogado		101			101
Central	IFD San Agustin					0
Central	IFD Luque					0
Central	IFD Ypacarai					0
	Total	208	2,278	942	91	3,519

Source: Cargos y Matriculados, Formacion Docente Department y Distrito, MEC, 1992

Table 1.2.2.6 Number of Qualified and Unqualified Teachers by Department (1992)

Department	Urban			Rural			Total		
	Qualified	Un-Qualified	Total	Qualified	Un-Qualified	Total	Qualified	Un-Qualified	Total
Asuncion	2,879	72	2,951	0	0	0	2,879	72	2,951
Cordillera	519	19	538	698	143	841	1,217	162	1,379
Guaira	397	25	422	460	180	640	857	208	1,062
Caaguazu	452	40	492	810	740	1,550	1,262	780	2,042
Caazapa	166	10	176	408	218	626	574	228	802
Itapua	576	57	633	535	820	1,355	1,111	877	1,988
Paraguari	432	15	447	493	122	915	1,225	137	1,362
Alto Parana	599	150	719	305	449	754	904	599	1,502
Central	1,699	101	1,800	996	161	1,157	2,695	262	2,957
Pte. Hayes	87	23	110	43	35	78	130	58	188
Total	7,806	512	8,318	5,048	2,868	7,916	12,854	3,380	16,234

Source: Estudio de Planta fisica, Nivel Primario, Año 1992

iii) There are currently 384 facilities providing anti-illiteracy and adult education in the priority areas. The number of facilities and participants by department is given in Table 1.2.2.7 and Table 1.2.2.8 respectively. Since the figures in these tables are department-wide figures, they do not necessarily agree with the corresponding figures for the exact priority areas. Based on the current population coverage ratio of TV broadcasting for each department, the number of participants in the priority areas is estimated to be approximately 30,000.

Table 1.2.2.7 Number of Facilities for Anti-Illiteracy Education and Adult Education in Priority Areas (1992)

U : Urban Areas
R : Rural Areas
T : Total

Department	Civil			Military/Police			Total		
	U	R	T	U	R	T	U	R	T
Asuncion	55	0	55	20	0	20	75	0	75
Cordillera	13	11	24	2	1	3	15	12	27
Guaira	15	13	28	2	0	2	17	13	30
Caaguazu	22	35	57	2	0	2	24	35	59
Caazapa	4	5	9	1	1	2	5	6	11
Itapua	10	4	14	2	1	3	12	5	17
Paraguari	8	10	18	2	0	2	10	10	20
Alto Parana	31	8	39	3	0	3	34	8	42
Central	52	30	82	4	3	7	56	33	89
Pte. Hayes	3	11	14	1	1	2	4	12	16
Total	213	127	340	39	7	46	252	134	386

Source: Departamento de Alfabetizacion y Educacion de Adultos, 1992

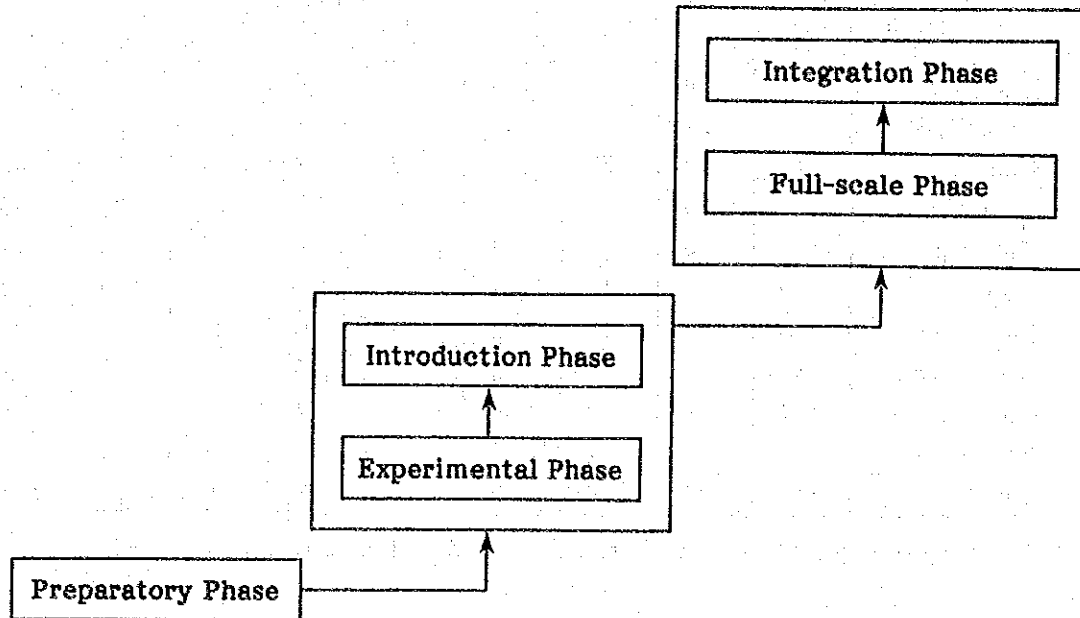
Table 1.2.2.8 Number of Participants of Anti-Illiteracy Education and Adult Education in Priority Areas

Department	Anti-Illiteracy Education	Basic Education	Vocational Training	Community Activities	Total
Asuncion	474	3,526	3,558	62	7,650
Cordillera	207	1,019	1,544	339	3,109
Guaira	249	1,554	498	400	2,701
Caaguazu	248	2,279	1,035	0	3,562
Caazapa	3	855	203	0	1,061
Itapua	670	1,347	1,100	3,683	6,800
Paraguari	10	644	630	0	1,284
Alto Parana	350	2,505	665	644	4,164
Central	591	3,555	3,640	0	7,786
Pte. Hayes	25	553	177	0	755
Total	2,827	17,837	13,080	5,128	38,872

Source: Departamento de Alfabetizacion y Educacion de Adultos, MEC, 1992

1.2.3 Total Set-Up

The total set-up of the Educational TV Network Establishment Project, taking the before-said planning principles into consideration, is shown below.



(1) Preparatory Phase

All institutions relating to educational TV broadcasting, such as the MEC, broadcasting station and schools, etc. should make the necessary preparations for the eventual commencement of full-scale broadcasting. All preparations must take the local conditions in Paraguay into consideration and the following measures appear relevant.

- (a) Establishment of a broadcasting management body
- (b) Introduction of institutional or administrative measures to organize and coordinate the systems to send or use educational broadcasting
- (c) Coordination between TV programs and the school curriculum or other educational programs
- (d) Training of key personnel, such as program planners, administrators, teachers, instructors and researchers, etc.

- (e) Implementation of public relations activities to enlighten the general public and target users on the merits of educational TV broadcasting
 - (f) Development of indices and procedures to monitor the progress made by educational TV broadcasting
 - (g) Production of actual programs and supporting materials
- (2) Test Broadcasting (Experimental Phase and Introduction Phase)

The targets of test broadcasting are summarized as follows.

- (a) Improvement of the personal abilities of the people involved in educational TV broadcasting, particularly school teachers
 - (b) Improvement of studies to evaluate the overall set-up as well as the possible effects of broadcasting (analysis of problems and program contents)
 - (c) Introduction of measures to improve both the effectiveness and efficiency of programs based on the findings of the above studies and analysis
 - (d) Checking and improvement, if any, of the broadcasting service quality
 - (e) Improvement of the operation system on the part of the broadcasting station
- (3) Full-scale Phase and Integration Phase

Full-scale phase will be started with well established system of educational TV broadcasting. The contents of programs become rich in terms of quality and quantity in Integration Phase which is the final target of this Master Plan.

(4) Implementation Guidelines for Test Broadcasting During Experimental and Introduction Phases

While the targets of test broadcasting are as described in (2) above, users are required to use the test broadcasting stage to analyze and solve possible problems associated with educational TV broadcasting with a view to further upgrading their educational activities. The test broadcasting phase is also important to diffuse and expand the acceptance of educational school broadcasting through the establishment of model schools. Special attention should, therefore, be paid to the following requirements in the implementation of test broadcasting.

- (a) Test broadcasting should last at least 2 - 4 years to allow for proper planning, basic studies and confirmation of improvements to the system.
- (b) A wide range of programs should be tested for various target groups to make the test worthwhile. It is essential to include some schools in rural areas, the educational environment of which is quite different from schools in urban areas.
- (c) As the financial basis of the broadcasting station is expected to be fragile for some time, the cost of test broadcasting should be kept to the minimum level.

Taking the above requirements into consideration, the implementation guideline for test broadcasting are as follows.

1) Initial Test Broadcasting (Experimental Phase)

Initial test broadcasting should use the existing CATV network to minimize the cost. At the time of the present study, 18 CATV networks are operating in Paraguay with a total subscription of some 50,000 households. Initial test broadcasting should use those networks in Asuncion (approximately 35,000 subscribers) while trying to include other areas as much as possible through the use of VCRs.

2) Test Broadcasting (Introduction Phase)

A transmitting station will be constructed in Asuncion prior to the introduction phase of test broadcasting to gain the minimum necessary coverage to achieve the ultimate targets of test broadcasting. The target groups include pupils of rural schools and the general public. The population coverage of the new transmitting station is expected to be just about 40% of the total population in 1992, as shown in Table 1.2.3.1, and as high as 62% of the target population in the priority area.

Table 1.2.3.1 Population Coverage of Asuncion Transmitting Station

Department	Population Coverage		
	Urban Areas	Rural Areas	Total
Asuncion	502,426	-	502,426
Central	688,614	175,926	864,540
Presidente Hayes	18,046	16,582	34,628
Cordillera	25,737	63,952	89,689
Paraguari	21,655	78,089	99,744
Total	1,256,478	334,549	1,591,027

(5) Development Program

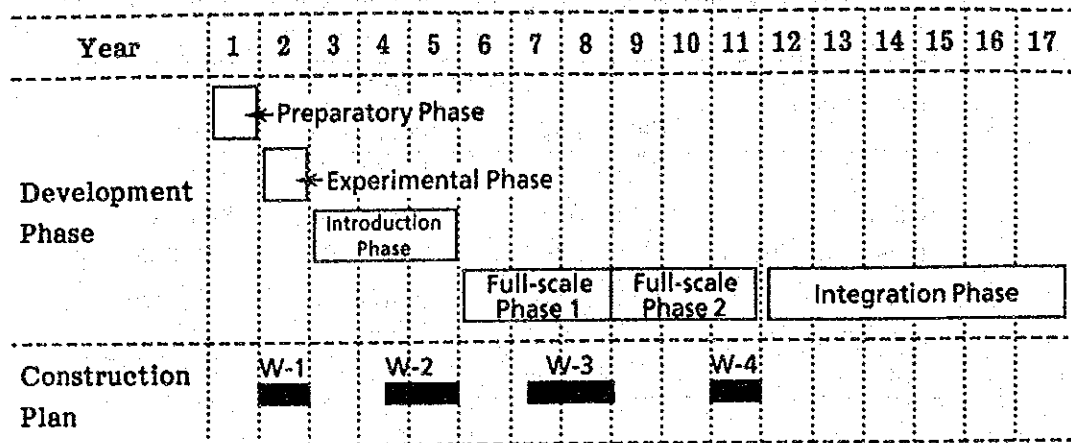
The total set-up of the project development program, the target year of which is 2010, taking required time for each phase into consideration, is shown in Figure 1.2.3.1. Figure 1.2.3.2 provides the development scenario of each program.

As this plan is first introduction of full-scale educational broadcasting system for Paraguay, there would be many requirements, such as coordination between this new system and conventional education system and training of required staff, etc. It would therefore take a significant preparation period prior to the commencement of the services.

In view of these circumstances, it was planned to have one year for preparatory phase, another one year for experiential phase where trial is to be conducted through CATV networks and subsequent 3 years for introduction phase which is scheduled to carry out test broadcasting with its main service

areas in the Metropolitan areas. Therefore, a full-scale broadcasting is designed to commence in the 6th year after the preparatory phase. Later in the introduction phase, construction works will commence on major local transmitting stations such as Ciudad del Este, Encarnacion and Villarrica. Construction of ETV Center in Asuncion will also commence during the same period to enlarge the necessary production capability.

Figure 1.2.3.1 Overall Development Program of Educational TV Broadcasting Network Project (Master Plan)



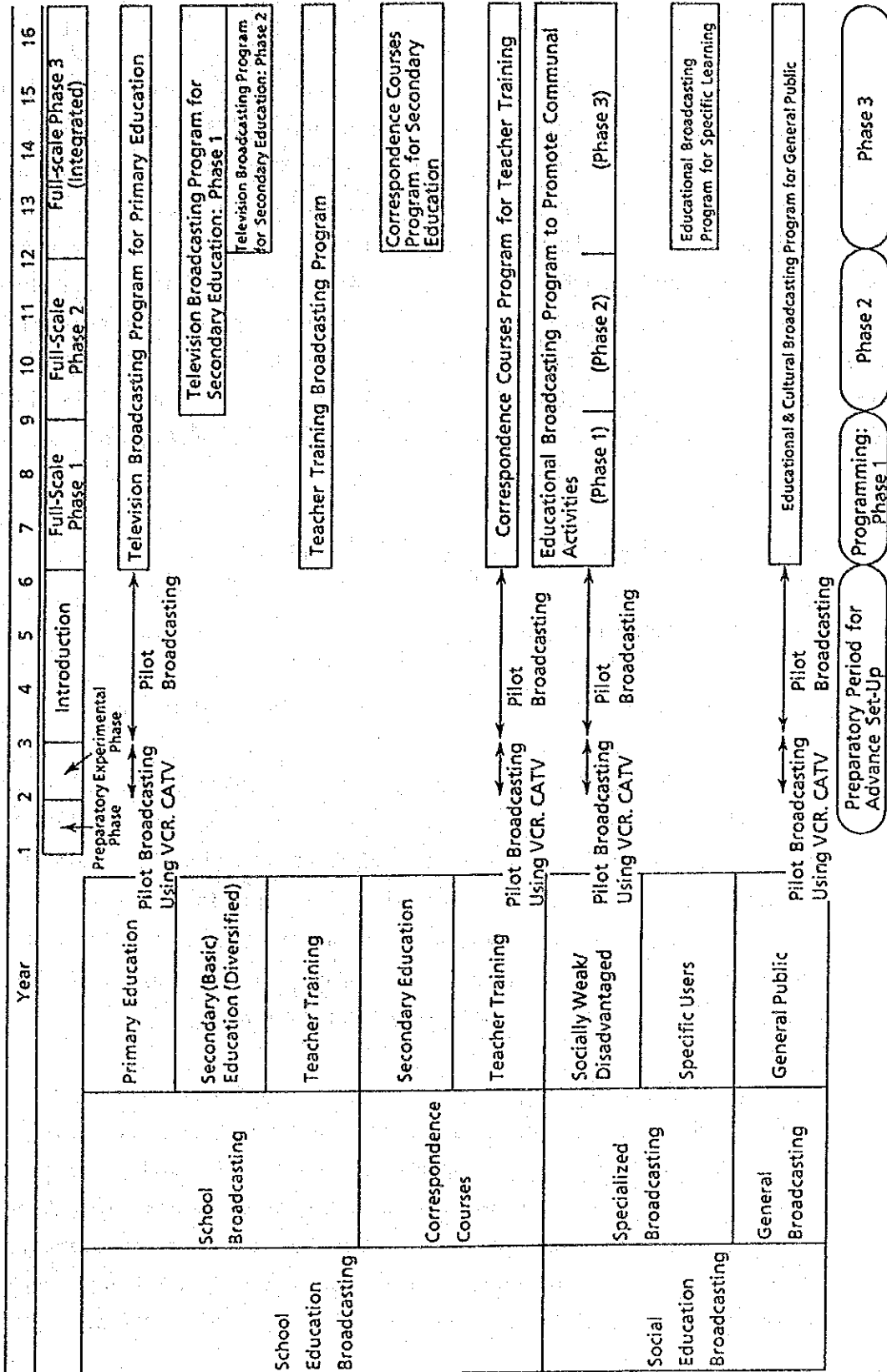
W-1: Asuncion Transmitting Station etc.

W-2: Major 3 Local Transmitting Stations etc.

W-3: 9 1st Plan Stations etc.

W-4: 10 2nd Plan Stations etc.

Figure 1.2.3.2 Educational Broadcasting Development Scenario



1.3 Basic Utilization and Operation System of Educational Television

1.3.1 General

As simple consolidation of the hardware has limitations in regard to the developmental aspect of educational TV broadcasting, the development of software is crucial to achieve the maximum benefits of such broadcasting. Based on this understanding, the Master Plan study must address the need to concretely establish a basic utilization and operation system for the proposed educational TV broadcasting. Moreover, the declared objectives of the Master Plan, which are understood as creating a support system for educational development in Paraguay, can only be achieved with general coordination and close linkage between all related organizations (whether old or new). Particular attention should also be paid to good linkage between the senders and receivers of TV programs.

1.3.2 Basic Utilization Modes of Educational Television

(1) School Education Broadcasting

1) Utilization of Live Programs and Recorded Programs

The utilization of live programs has the disadvantage of a time constraint as far as users are concerned as it is only possible by definition to watch the aired programs once. This limited availability, however, is expected to increase the seriousness of the users (pupils and teachers) about learning from such programs, thus improving the efficiency of educational TV broadcasting. Live viewing does not require additional equipment, such as a VCR, and is easy to introduce.

The recording and replaying of programs by a VCR enables users to watch program in accordance with their own timetable. Moreover, the time difference between broadcasting hours and school hours does not matter. The use of VCR provides new dimensions in the utilization of educational TV programs in that a program can be arbitrarily stopped by a teacher in order to allow pupils to think and that only parts of a program can be shown to pupils in accordance with the teacher's judgment.

The choice between the utilization of live programs and the utilization of recorded programs should be flexible to achieve the maximum educational effects of these programs in view of the objectives and different target groups of the programs. Despite the basic requirement for flexible choice, however, the current financial and other conditions of primary and secondary level education in Paraguay do not allow the immediate allocation of VCRs to all primary schools. Consequently, the basic mode of utilizing educational TV broadcasting for primary and secondary schools is live viewing while the use of VCR with its additional advantages is considered a desirable stage of development in the future.

In regard to teacher training institutions, a combination of live viewing and the replaying of recorded programs for various purpose is immediately feasible as several teacher training institutions already have VCRs.

2) Serial Viewing and Selective Viewing

The main objective of school broadcasting for the primary and secondary education is the further improvement of the learning performance. To achieve this objective, it is important to facilitate and to promote the interest of pupils in learning as well as knowledge, understanding, skills and a positive attitude relating to learning through the long, continuous utilization of educational TV programs.

Consequently, the basic form of utilizing educational TV programs for the primary and secondary education should be continuous viewing of an entire series of programs. In other words, such series should be a part of the curriculum.

One obstacle to serial viewing is the low attendance rate. Many pupils in Paraguay are often prevented from attending school due to family commitments (particularly during the busy farming seasons) and weather conditions (for example, the blocking of roads due to flooding) even if they really wish to attend school. It is necessary for the production side of programs to take such problems into consideration when making programs. While each series of programs must be consistent to

achieve the given objectives, it may be necessary to prepare supplementary special series designed for broadcasting during the summer and winter holidays to reinforce the achievements of pupils through the normal programs. Teachers must not depend too much on educational TV broadcasting but should combine it with ordinary classroom teaching to achieve the maximum educational effects.

In contrast, the utilization of these programs at teacher training institutions should be basically conducted on a selective basis. Only those programs closely related to the curriculum or which cater for the specific needs of users (trainee teachers, etc.) should be selected due to the following reasons.

- Teacher training involves multiple subjects. This multitude of teaching subjects and the time constraint makes it rather difficult to use systematically produced programs for serial viewing as in the case of primary education.
- Selective viewing to suit user requirements can expect to have the strong support of instructions because the programs can be treated as convenient teaching materials to supplement the main line of teaching.

3) Self-Sufficiency-Oriented and Application-Oriented Modes of Program Utilization

Primary school teachers in Paraguay work an average of about 1.7 shifts/day and it is extremely difficult for them to find the time for their own studies with a view to improving their teaching. With the gradual improvement of the teacher shortage in the future, however, it is expected that the work load of teachers will be reduced. Nevertheless, as 2 shift teaching has a certain rationality from the financial point of view, the introduction of school broadcasting must be designed so as not to create an excessive extra burden on teachers. In order to avoid an extra burden on teachers, the utilization of educational TV programs should be basically oriented towards self-sufficiency in regard to the viewing process with pupils learning key point through viewing with the appropriate guidance of teachers rather than the application-oriented

mode where both teachers and pupils are required to conduct much preparatory work.

In the case of teacher training programs, the application-oriented utilization of these programs should be added to the basic self-sufficiency-oriented utilization to meet the need to develop the program contents to better suit the training process.

The various program utilization modes discussed so far are summarized in Table 1.3.2.1.

Table 1.3.2.1 Basic Utilization Modes of Educational School Broadcasting

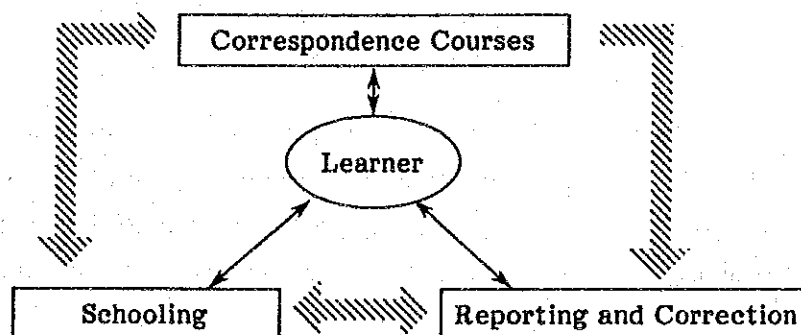
	Mode (1)		Mode (2)		Mode (3)	
	Live	Recorded	Serial	Selective	*1 SSO	*2 AO
Primary Education	●		●		●	
Teacher Training		●		●	●	●

*1 Self-sufficiency-oriented Utilization *2 Application-oriented utilization

(2) Correspondence Courses Using Educational Television

In principle, to make the correspondence courses using educational TV broadcasting effective, it is crucial to have a better combination of viewing at home and classroom teaching at school. The concept of correspondence courses is illustrated in Figure 1.3.2.1.

Figure 1.3.2.1 Concept of Correspondence Courses using Educational TV Broadcasting



A correspondence teacher training course is considered as a measure to reinforce programs to give unqualified incumbent teachers appropriate qualifications using television programs. However, broadcasting can only play a supplementary role to the main pillars of the learning process, i.e. direct tutorials during holidays and home study using textbooks, etc., and learning by correspondence alone is insufficient for the participants to obtain the required qualifications. The effectiveness of the relevant TV programs largely depends on the motivation of the target viewers (unqualified incumbent teachers) and it is possible for these programs to become the goods in a window display without real purchasers.

In order to make these programs really effective, measures to encourage viewing must be introduced, including the integration of these programs in the official teacher qualification syllabus for home learning. One concrete measure is the reduction of the required number of tutorial hours to shorten the qualification process if the course participants prove sufficient learning through the continual viewing of such programs.

(3) Social Education Broadcasting

In principle, there are 2 modes of utilizing educational TV broadcasting to enrich social education activities.

(a) Classroom Viewing

This is the integration of TV programs in literacy and adult education classes. As most of these classes take place in the evening, the broadcasting hours must be carefully arranged taking account of those people who may not have TV set.

(b) Small Group Joint Viewing

Using such places as churches, private houses and educational facilities where TV sets are available, a small group of viewers is formed for the joint viewing of specific programs which meet the learning requirements taking account of those people who may not have TV set.

Further improvement of the effects of social educational broadcasting means that the programs provided must be capable of assisting viewers in the solving of problems encountered in their daily lives or enhance their general level of culture and knowledge. Improvement of the quality of home viewing, i.e. culture-oriented viewing, is essential in this context.

1.3.3 Utilization and Operation System of Educational TV Broadcasting

(1) Paramount Need for Coordination

Educational TV broadcasting has a bright future in school education as well as social education. However, it is not easy to organize the educational use of TV programs as envisaged by the Master Plan which aims at establishing Paraguay's first full-scale educational broadcasting network.

The social and educational functions of educational TV broadcasting can be fully performed only when the arrangements for systematic utilization by users are matched with the careful planning and production of programs by the production side. The prospective users are well organized in terms of school education and social education. Of the various types of educational TV broadcasting, that for school education is particularly important in the light of long broadcasting hours and strong appeal to viewers (school pupils).

Educational TV broadcasting must be operated with the coordinated efforts of the 3 key players: the broadcasting station which airs the programs, such viewers (users) as teachers and pupils and such official organizations as the MEC and the CREs. The need for coordination is paramount for the successful outcome of educational broadcasting.

(2) Concrete Roles of Players

1) Broadcasting Station

The broadcasting station should study desirable ways of producing good programs by means of analyzing the viewers' demands and reactions and should also prepare an optimal broadcasting schedule which incorporates newly developed educational and culture programs. Viewers' opinions and the actual use of programs by viewers must, therefore, be

continually studied so that the findings can be used for program improvement. Another responsibility of the broadcasting station is the provision of various information on the contents and other aspects of programs to stimulate the active utilization of educational programs at school and in the community.

2) Users

Users are required to appropriately select and utilize the broadcast programs to suit the communal or school requirements. It is important for them to improve their own skills to use programs to a better end. The ability to prepare a plan for the effective utilization of programs is one such skill. Schools should conduct studies on the achievements of viewing educational TV programs. It is particularly important for each school to create a rational efficient system to utilize educational broadcasting. Some suggestions in this regard are given below.

- (a) The utilization of educational TV programs should be flexible, taking into consideration such factors as the school size, classroom size, number of classrooms and their floor area, number of TV sets and their locations, teaching targets and program contents.
- (b) The training of incumbent teachers using TV programs should be implemented and cooperation between teachers in this regard must be established.

3) MEC and CREs, etc.

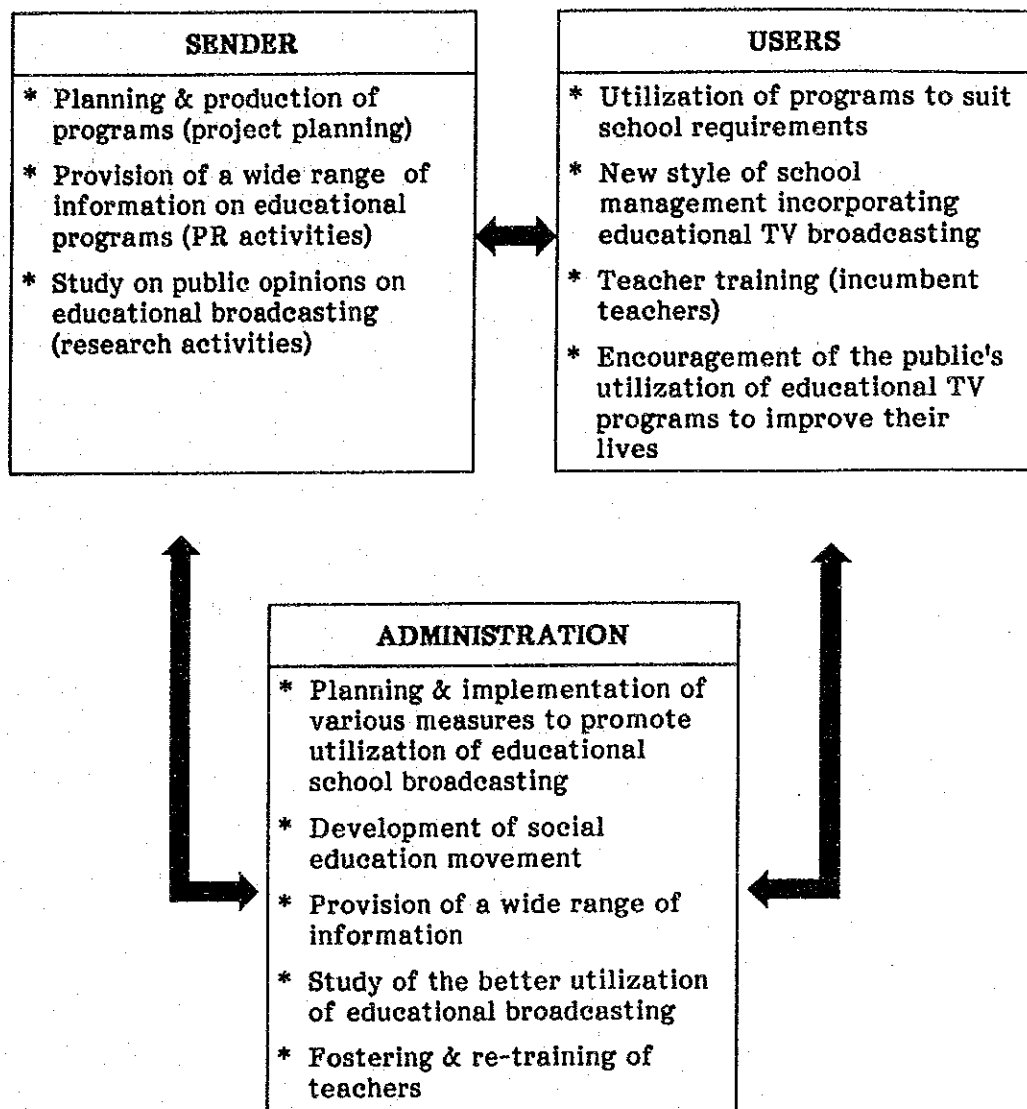
The MEC and the CREs, etc., are required to introduce various measures to assist the wide utilization of educational school broadcasting. They should also act as intermediaries between the broadcasting station and users to promote educational broadcasting for the purpose of local cultural activities, social education, literacy education and adult education, etc.

The MEC and planned committees and councils, etc., should conduct studies on the degree of interest in and utilization of educational

broadcasting on the part of pupils and teachers. They should also conduct basic studies on the characteristics and effects of educational broadcasting together with studies on programs and ways to improve them.

As discussed so far, the establishment of a close relationship between the sender and users of educational broadcasting is essential in order to improve its educational effects through its wide acceptance and utilization. The total system of educational broadcasting utilization/operation is schematized in Figure 1.3.3.1.

Figure 1.3.3.1 Educational Broadcasting Utilization and Operation System



CHAPTER 2 ORGANIZATION AND MANAGEMENT PLANS

2.1 Basic Policy on Organization and Management Plan

2.1.1 Basic Elements of Management for the TV Broadcasting Services

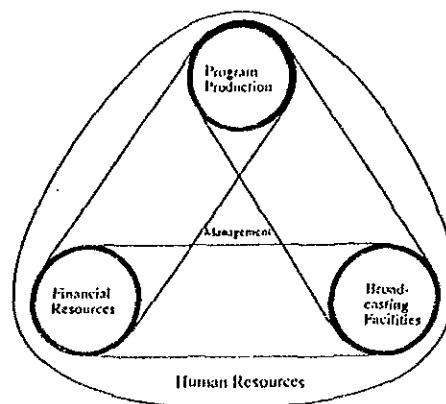
Whatever the ownership status of the undertaking of the TV broadcasting services, either private, government, or mixture of both, it is vital to establish properly below mentioned basic elements consisting of the management of operating organization. A maintenance of harmonious balance among these elements in accordance with a predetermined management plan is a key to keep optimum operational performance. As these elements are closely interrelated, a management body responsible on operation should pay continuous attention to the formulation of a proper management plan and to its implementation by attaching importance to harmonization of such relevancy of these elements.

The major elements consisting of management system of TV broadcasting service can be identified as follow:

- o Program production
- o Broadcasting facilities
- o Human resources
- o Financial resources

The conceptual inter-relationship of these elements can be illustrated as shown in Figure 2.1.1.1 below.

Figure 2.1.1.1 Inrter- relation of Elaments



When these 4 elements are interlocked harmoniously with appropriate balance, a sound and a smooth operation becomes available and it would form a base for the future developments. However, even one of these four elements causes a defect, the decreased level or performance of such elements would become a decisive factor to reduce the level or diminish successively the performance of the whole system. A decrease of the expected effectivity of whole system would cause a functional disorder of management and operation as a result.

The inter-relation of respective elements are outlined as follows:

(1) Program Production

The contents of program is the most important elements among 4 elements to determine a superiority of TV Broadcasting service. Should the contents of the program be judged that they cannot satisfy targeted viewers' demand or achieve an objective of program or undertaking, a continuous and a stable financial in-put for the operation of undertaking would become difficult from the financial sources neither of government budget nor of commercial interest. The programs are the creative products of a team of experts in respective field through the process of planning, formation and production. Therefore, quality and level of program depends solely on a capability of personnel in charge of program production. It requires more equipment and skilled personnel and related operational fund and expenditures to produce better program.

(2) Broadcasting Facility

As it became available electronically as well as mechanically to emits a clear and stable electronic radiation of TV broadcasting due to the establishment of the technical standards which corresponds to recent technological advancement, it is difficult to determine a technical superiority from one equipment to another on condition that an appropriately designed broadcasting facility is provided in accordance with well prepared specific plan. However, if the contents of the program for broadcasting are poor and its broadcasting hours are short, the investment cost on facility does not meet with an expectation of the benefits or effects. On the contrary even the content of a program is excellent but broadcasting facility is poor, such program does not

attract viewers' interest. Or if a number of viewer is limited due to an electronic wave obstruction, it cause a decreased investment effect. In such point of views, the broadcasting facility is desirable to conform with a long term program production plan which is elaborately prepared taking into account the clear objectives of broadcasting program and a demand of targeted viewers.

(3) Human Resources

It requires to locate the excellent commensurate personnel to the most appropriate positions respectively in order to conduct operation and management of the TV broadcasting undertaking effectively. Especially program production requires high creativity of the personnel in charge, a number of skilled and experienced experts should be obtained. In addition to this, a number of skilled personnel for techniques concerned to handling, operation, maintenance, control, etc., of transmission as well as studio equipment. However, should a recruiting of experienced excellent personnel be difficult, it may require a selection of personnel who is positive and willingly to become expert of concerned field of works then to raise them at expected level through an intensive training. Should a selection criteria of personnel be established, a recruitment of personnel and training become available in accordance with well prepared plan, such recruitment of appropriate personnel would not be so difficult on conditions that a sufficient period for evaluation of capability of relevant personnel and a fund is secured to cover an expenses incurred for the exercise of such process.

(4) Financial Resources

The basis of above three elements is a financial input into the operating entity. A sufficient finance is indispensable to produce better programs, to procure appropriate equipment, to maintain the equipment in good order, to employ skilled personnel and to develop human resources. A lack of finance, insufficient budget and rigidity of money flow cause malfunction of the operating entity. An inferior quality of the programs produced by unskilled personnel, unbalanced planning of broadcasting facilities, a lack of human resource development, etc., would cause the degradation of performance of the operating entity, then, it would create a obstacle to continue the financing into the operating entity. The balanced distribution of finance among above elements is a key to keep harmonized operation and management. The

management body should pay attention continuously to achieve optimum finance to gain the best effects and the benefits.

As mentioned above, the plural elements consisting of management system are closely inter-related and affecting each other, the required technique and technical capability is comparatively high and specialized when compared with other undertaking in a common industry, in the field of agriculture or so; and requirement of high creativity and artistic workmanship characterize the operation and management of TV broadcasting service.

As illustrated in Figure 2.1.1.1, a position of controlling an operation and management of TV broadcasting service is located in the intersection of 4 major elements. A key point of managing the operation of such system is a harmonization of these elements by a coordinated plan of operation, analysis, decision making, and instructions.

The following paragraph describes various themes and basic policies concerned to four major elements relative to the organization and management planning in due consideration of present situation of Paraguay.

2.1.2 Major Elements for the Formulation of Basic Policy on Organization and Management Plan

(1) Present Situation of Educational TV Broadcasting

At present, in Paraguay, 2 private commercial TV broadcasting undertakings exist, however, no national or public TV broadcasting exists. When compared with neighbor countries in South America as shown in Table 2.1.2.1 (Outline of Educational TV Broadcasting Services in South American Countries), the significant difference with other countries is that Paraguay alone has no government own television station.

Table 2.1.2.1 Educational TV Broadcasting Service in South American Countries

Name of Country (TV system)	Population and No. of TV sets	Name of TV Station(s)	No. of Channel	Responsible Ministry	Financial Source	Broad-casting Hours	Contents of Programs	Private Stations
Argentina (PAL-N)	31,930,000p	- ATC (Argentina Television Color)	Ch-7	- SOR (Supervisory body) - Public Information Agency (Supervisory & operating body)	Commercial advertisement (Max. 12 min per hour)	135 hrs. per week	Integrated program	- Liverida - Telefe - Arte - La plattz
Brazil	147,400,000p	- TV Nacional de Brazilia - TV Educativa			- National account - Regional government account	13hrs per day 11 hrs	Illiteracy program and adult education program are obligatory	- TV Globo - R/TV Bandirantes - Brazil TV System - TV Gaucho
Bolivia (M. N/NTSC)	6,800,000p	- TV ENTB	Ch-7	Min. of Education Min. of Transport & Communication	Commercial advertisement (65%) & national account (35%) (US\$1.43 million in 1983)	9 hrs	Educational program Self-production shares 50% News twice a day	- ATB Red National - 8 TV Stns operated b university)
Chile (M/NTSC)	12,540,000p 1,350,000u	- TVNC	Ch-7	Min. of Transport & Communication Min. of Education Min. of Education	Commercial advertisement	18 hrs	Educational program shares 4% of total broadcasting hours	- TELEONCE (National Chile University, Chile Catho. University)
Colombia (M/NTSC)	29,730,000p	- INTRAVISION (Radio & TV Authority)	Ch-7 Ch-9 Ch-11	Min. of Communication	Commercial advertisement	Ch-7 17.5 hrs Ch-9 8 hrs	Ch-7 broadcasts educational programs for primary school for 3 hrs each AM and PM.	- None
Dominica	672,000p	- RTVD - Santo Domingo RTVD	Ch-4	Presidential Council	Commercial advertisement (80%)	20 hrs	- News 33.2% - Education 9.1% - Culture 10.6% - Entertain 43.8% - Religion 3.3%	- TELEANTILLI - CIRCUITO INDEPE - RAHINTEL - Colorvision - Telesystem - TV 13
Elsalvador	5,000,000p 1,000,000u	- TVCE (Television Cultural Education)	Ch-10	Min. of Education	National budget of Min. of Education.	8 hrs per day 12 hrs per Sat. & Sunday	Education program Children 23.0% Family 31.0% Adult 46.0%	
Mexico (M/NTSC)	81,160,000p	- IMEIVISION (Institute Mexicano de Television) - INP (Institute Politechnico National)	Ch-7 Ch-13 Ch-22 Ch-11	Min. of Interior Min. of Education	Ch-7, National budget. Ch-11, commercial advertisement	Ch-7 18hrs Ch-13 19 hrs Ch-22 9 hrs	Ch-7 broadcasts educational program for children, youth and adult, plus some entertainment programs. Ch-13 broadcasts documentary program 21%, news 15% and others for middle class people. Ch-11 broadcasts Educational 41.0% News 19.0% Public Service 7.0% Sports 6.0% Children 8.0%	- Televisa - Ch-2 - Ch-4 - Ch-5 - Ch-9
Panama (M/NTSC)	227,000p	- CANAL ONCE (Located in Panama Univ. w/1 studio, 5kW Tx & 55m ant.) 48 staff	Ch-11	Systema de TV Educativa (Independent specialized agency)	Commercial advertisement	10 hrs per day 13 hrs Sunday	Educational program shares 25% and rest for integrated programs.	- PANAME-RICANA - CPRD - LATINO-AMERI - Emp. RADIODI - UNIVE DE TV

The private commercial TV station namely Channel-9 had allocated about one hour a day of broadcasting time frame to the government's program for public relations, educational program, etc., and broadcasted number of educational programs produced by the MEC on fee basis for about 10 years (1969 - 1980) in the past. When the number of private commercial TV station became 2 in 1981, Channel-9 called off the broadcasting of such educational program as to rationalize a revenue due to a start of competition between these 2 TV stations. It might be a part of the reasons of ending broadcasting of educational programs that the MEC was not in the position to maximize the use of the broadcasting services of the private commercial TV stations since the programs were not produced systematically and most of the programs were of spot type.

Although present Regulation of Broadcasting Service stipulates that even TV stations are of private status they should allocate up to 5% of effective broadcasting hours per day for the use of the government public relations and educational programs. However, such allocated period of broadcasting is too short to use for the educational TV programs planned to be operated at full-scale level aiming to improve the quality of national educational level. Under such circumstances, it is imperative to operate and manage a TV broadcasting station owned exclusively by the government (or government related) entity.

(2) Educational Sector Development by Utilization of TV Broadcasting Service

The main theme of political reformation since February 1989 are placed to the democratization of the autocratic structure, the decentralization of the administrative power, the minimization of the government interferences, the privatization of the national corporations, and the liberalization of politics and economy. This basic policy of the government is clearly spelled out in the Macroeconomic Policy Guidelines prepared in 1991. In the educational sector, the institutional reformation of public educational system has been rapidly progressing in line with the basic policy direction of the government. To the extent of reformation in the field of education, the improved quality of education in general, and the improvement of intellectual level, moral and culture of people at national level would create a root of democratic society and it would form a basis of stabilized society as well as the growth of nation; are enumerated as the basic policy adopted on the reformation and the development of the educational sector.

A substantiation of broadcasting education utilizing the educational character of television which is the most effective communication media of audio-visual information for the realization of the above mentioned policy is a basis of this Master Plan study as clearly described in Chapter1 "Educational Utilization" of Part II.

It is the basic policy of the government to avoid an interference to an economic rationalism of the private commercial TV stations who ignore programs of which profitability is thought to be low such as educational program. As mentioned in the previous paragraph the present Regulation of Broadcasting Service (Decree No. 26/504 of the ANTELCO who controls and supervises whole matter concerned to the telecommunication.) Article 2. stipulates a criteria of program contents to avoid an inferiority of quality of televised culture, and Article 12. stipulates that the TV stations of private status should allocate up to 5% of effective broadcasting hours per day for the use of the government public relations such as an advertisement relative to public sanitation, information related to the maintenance of social order and educational programs. This decree could be a minimum government intervention into the TV broadcasting service. However, as mentioned in above paragraph, it is clear that the realization of subject plan (Establishment of Educational Television Broadcasting Network) require an establishment of the government owned or government controlled TV station exclusively for the broadcasting of the educational program.

(3) Basic Policy of Macroeconomic Policy Guidelines

The basic policy of the Macroeconomic Policy Guidelines spells out the necessity of the presentation of the government to create a basis of guarantee of fair and free competition based upon the free market economic principal by decreasing the intervention and participation of the government into the businesses which private interests may able to undertake, and by introduction of a high participation of private interests on condition that it will not create a domination of market. And it emphasizes adoption of below-mentioned policies to achieve such objectives:

- 1) Decreased government interventions into the production and services;
- 2) Market exploitation and reinforcement of competitiveness by the promotion of privatization;
- 3) Respecting free will of nation and protection of private interest;
- 4) Improvement of production efficiency through promotion of competition and equal distribution of income;
- 5) Provision of investment environment; and
- 6) Modernization of government through a manifestation of governmental functions.

In particular concern to the above-mentioned policy item 6), it is recommended in this policy paper that the modernization of the government by manifestation is to be made available through efficient participation of the government into social development programs such as in the field of education, public health, recreational and cultural activities including a promotion of sports supported positively by a participation of communities.

And in the article concerned to the promotion of privatization, it emphasizes positive participation of the government in the activities to which the private enterprises (commercial interest) do not show interest and its production and services are deemed to be indispensable for the society on condition that a proper control on finance and economy is exercised by the government, and such government participation does not contradict to the privatization policy of the government.

As described above, the policy direction of the Macroeconomic Policy Guidelines which emphasizes a reduction of the government functions and thereby reinforces a free market economy system does not contradict against the plan of the establishment of educational TV broadcasting service which requires a positive government's participation for its operation taking into account that the educational broadcasting service of full scale cannot be undertaken by the private interests.

(4) Present Situation of Educational TV Broadcasting Services In South American Countries.

As outlined in the Table 2.1.2.1 (Educational TV Broadcasting Service in South American Countries), most of the educational TV broadcasting services are operated by the government own TV stations and administered by the Ministry of Education or Culture which is responsible for public education in respective countries. In addition to this, although most of the ownership of TV station are of government, operational income and revenues depend on an income derived from commercial advertisement charges. Table 2.1.2.1 shows a number of examples of national education TV station which is financially supported fully by the government budget system. In reality, the operation of the national TV broadcasting stations which totally rely on the government budget system have been facing financial troubles due to inadequate allocation of budget for operation. It is to be noted that among all the South American countries, Paraguay is one of a few countries which has no government owned or operating national TV station.

(5) Recruitment of Required Manpower

The undertaking of the TV broadcasting service in Paraguay does not seem to be special business judging from that 2 private commercial TV stations have been existing and well maintained for years. However, even in these two TV stations, there were none of experts at the time of commencing operation. The present experts who operate and maintain the broadcasting facilities were personnel who were former employees of the ANTELCO and who acquired a basic technical skills necessary to operate electronic equipment consisting of telecommunication facilities. Most of such experts have had received on-the-job training for considerable period to become experts under such training program conducted by the foreign experts hired by TV stations for the purpose of doing so.

On the other hand, a number of excellent skilled staff for program production is insufficient even at present. The TV stations have been continuously making efforts to train selected university students to be skilled program producers. This indicates that it is difficult to obtain trained personnel commensurate with the operation of TV broadcasting services directly from present labor market. Taking this situation in consideration, technical training

program are planned to meet with such demand both in public and private institutions.

Under rapid progressing of technical innovations, the Institute of Paraguayan Telecommunication (IPT), technical training institute for telecommunication related services of the ANTELCO, was expanded with technical cooperation and grant aid for expansion of relative facilities aiming to respond ever changing labor market in conformity with international technical innovations and supporting the expansion of the telecommunication services from manpower development point of view. A technical training course relative to the television broadcasting is planned to be included in the part of this expansion program. With respect to the program production, a private enterprise established a specialized school for training of technicians, experts as well as artists required for program production even in a small scale at present.

As the MEC is a huge organization having about 30,000 personnel, and its annual budget shares almost 20% of total budget of the government administration and its 80 to 90% is allocated for personnel remuneration. Increased salary or number of teachers directly affect national financial situation. There is a great potentiality to provide a certain number of personnel from existing pool of teachers who may commensurate with the requirement of the operating entity of planned educational TV broadcasting program.

As mentioned above, the required personnel of the operating entity of the plan is almost nil or quite insufficient in number at present in the labor market excepting the Teleducation Department of the MEC which hold a certain number of personnel required although it number is limited. However, it should be realized that the securing of personnel required in the respective fields of activity would be available on condition that selection and training of personnel of potential resources are exercised effectively.

2.1.3 Basic Policy on Organization and Management Plan

(1) General

Following basic policies were established for the planning of the organization and management relevant to the establishment of operating entity for the educational TV broadcasting services of which primary aim is to utilize TV broadcasting service, the most effective means of audio-visual information media, for an improvement of nation's educational quality, promotion as well as heightening the level of culture.

Due consideration are given to the following matters and conditions for the preparation of a basic policy on planning of organization.

1) Optimum development

As discussed in previous chapter 2.1.1, 4 basic elements of management for the TV broadcasting services are to be harmoniously developed to attain successful operation of proposed entity and optimum effects to ensure a realization of objectives mandated to the entity being planned herein.

2) Phased development schedule

At present, there is no single organization which is capable, competent or having sufficient experiences to undertake production of programs, and broadcasting of such programs in terms of volume and quality planned to be achieved except 2 existing commercial TV companies in Paraguay. However, commercial TV companies are not in position or cannot be entitled to undertake the broadcasting services envisaged herein this plan. Under such circumstance, a build-up of organization to undertake planned broadcasting services herein is to be realized gradually according to predetermined phased development scheme.

3) Administrative structure

The major objectives of broadcasting service is an improvement of quality of education and development of education sector utilizing broadcasted educational programs. Therefore, the entity undertakes educational broadcasting services should be directly or indirectly under the supervision and administration of the government as the matter directly concern to education at national level.

4) Government organization

The ministry and government agency concerned to the education and the TV broadcasting (telecommunication in general) are the MEC and the ANTELCO of which supervising ministry is Ministry of Public Works and Communication (MOPC) respectively. The MEC is a largest ministry in terms of number of employee and its budget scale is the largest among other ministries. However, as almost 80 to 90% of budget have been allocated for personnel expenditure, the budget allocation for capital investment has been quite limited. The government has been emphasising efficiency and full utilization of existing resources as much as possible to minimize government expenditure.

5) Manpower resources

At present, a number of experienced and skilled personnels in both production of educational program for TV broadcasting and operation of TV station technically, is quite limited within the government organization, however, the MEC and the ANTELCO can be regarded as the most realistic potential manpower sources for program production and broadcasting services respectively.

6) Financial resources

The financial constraints have been always a major obstacle of public infrastructure development in Paraguay. As mentioned in elsewhere in this report, capital investment and current expenditure of the MEC has been limited. The government emphasis a promotion of a privatization or

realization of decreased intervention and participation of the government upon free market economic principal.

7) Limited government budget

Under such situation mentioned above, the utilization of existing financial and manpower resources; and a possible source of revenue not limited to the government budget or subsidy have to be planned as much as possible to attain optimum development.

(2) Governmental Administrative System

The government ministries and agencies directly concerned to the Project are the MEC in the field of education, and the MOPC in the field of broadcasting services. The executive agency formed under the MOPC to control and supervise whole related matter of telecommunication is the ANTELCO.

The MEC is a central administration body of the nation in the field of education naturally, so it should be a core agency and directly involve into the operation of educational TV broadcasting services of which objectives are to promote the improvement of quality of education. However, the field of activity where TV broadcasting services required is wide and the fluctuation of variable cost or general expenditure for the program productions would become high due to increased variety of the program production. And it is expected that the existing national public service system particularly for the payment of salaries would not fit to the efforts being needed to recruit a number of appropriate personnel and accelerating them into positive participation to the activities as well as to keep them in the organization.

Present process of budgetary planning, exercises, office regulations; and regulated service hours, service system etc., will constitute of and becomes an obstacle to hinder a smooth operation of the TV broadcasting services. In this point of view, the planned organization should be not an expanded part of the existing relevant ministries but a newly created organization out of presently existing ministries and agencies so as to be a flexible organization at certain extent in respect to the operation.

The basic policy on the planning of formulation of organization is that the operating entity should be like a semi-public organization which is to be created by various ministries out of present administrative structure, however, the different roles and functions of the relevant ministries should be harmoniously planned to be jointed so as to attain optimum effects taking into account that the MEC is to be a core ministry in the view point of special mandate given to the educational TV broadcasting services.

(3) Organizational Plan Policy Framework

As previously described in sub-chapter 2.1.1 "Basic Element of Operational System of the Educational TV Broadcasting Services", the formation and production of program is a key of sound operation of the system. The basic policy on the planning of organization is to design the organization of having high maneuverability and keeping economy in operation aiming at efficiency of production of program which assure the satisfaction of viewers, hence, a qualitative improvement of the education.

The program production requires integrated understandings and considerably high knowledge about education and speciality in this field. In this viewpoint, the number of staff in charge of program production should be as minimum as possible so as to concentrate a required investment (money and time) for training them taking speciality of TV education. However, the variety and field to be dealt by them are so wide that the reinforcement of performance by attaching a sort of staff function to the department in charge of the program productions (line function). Those members consisting such staff function will be composed of a group of specialized advisers. The highest attention has to be paid to this department in the organization with respect to the selection of personnel, training and fixing the staff at respective position within the organization framework.

As of the manning for the operation and maintenance of the transmission and other appurtenant facilities, it requires also a certain number of specialized personnel, but the number of staff required could be as minimum as possible by employment of no-man operation of equipment, rationalization of equipment to minimize personnel attendance, making control and maintenance of equipment as easy as possible. It is recommendable to set a selection criteria of personnel as high as possible, minimize number of staff, concentrate training in-put into

very limited number and employ formally well capable member picked up in such method for operation and maintenance of equipment by a group composed of a members who are a kind of elite (in terms of performance and skill but not in terms of social class).

Taking into account the above mentioned matters, the organization appropriate to undertake the educational TV broadcasting should be of an amalgamation of part of two concerned ministries i.e. the MEC as one part and the MOPC as the other part to effectively utilize existing resources such as already available manpower listed on pay-roll of the government and specialized functions represented by the Teleducation Department as one part and the ANTELCO as the other part.

In addition to this conceptual plan of organizational structure, it should be considered that the established organization will evolve further in accordance with the progress of development of services envisioned herein.

(4) Managerial Plan Policy Framework

The basic policy on the formulation of the operational plan is to make the plan operative within the framework of the national administrative structure in conjunction with the policy of organizational plan as mentioned in previous paragraph (3) organizational plan in general; and has to be as flexible as possible so as to attain maneuverability of the organization.

The operational plan should be made available to be developed in line with the phased development scheme described above, thereby, avoiding an excessive in-pur of required resources. When the managerial and technical level reaches or exceed to the level of existing commercial TV broadcasting companies, a substantial preparedness of operational fund would become necessary to increase effectivity of operation and expand the variety of program further.

Judging from the character of the services, a national budget is thought to be a core of the financial resources for the operation of the operating entity, however, a national budget itself has a certain limitation and naturally operational ability of financial resources is not so easy due to a rigidity of administration. When a flexible operation is required, a sufficient fund which can be used flexibly on free hand basis.

A fund having such character can be created from the revenues of selling a part of broadcasting hours to various governmental organizations, governmental entities and private enterprises for their public relation and commercial advertisement. Especially the revenue from the commercial advertisement which complies with a certain rules and standards of private interests can be generated by selling a part of broadcasting hours in Saturday and Sunday or in a certain hours in the weekdays. Contents of the program which is allowable to bear the commercial advertisements would be a kind of entertainment program, documentary program, sports, news, imported movies, theater movies etc. as the commercial TV broadcasting companies do.

2.1.4 Recruitment of Manpower and Training Plans

(1) Sources of required personnel

1) Sources of Recruitment

The staff required for the operation of the TV broadcasting station can be divided in three categories as (1) General administration, (2) Program production and (3) Transmission of programs. The types of staff required for relevant categories are:

1. General Administration - Administrators
- Common office workers
2. Program Production - Program directors
- Producers
- Camera man
- Lighting man
- Audio expert
- Video engineer/technician
3. Transmission of Program - Engineers for transmitting operation
and maintenance of equipment

a) General Administration

A necessary number of staff for the general administration can be recruited from the existing manpower sources as much as possible.

b) Program Production

i) Sources of recruitment for program producers

As for the program production, the existing Teleducation Department of the MEC is a major source of recruitment for necessary manpower in the field of the program production. The reinforcement of this department and increased number of staff in this department would become necessary to be prepared for the implementation of the national educational TV broadcasting service program. However, in fact that a number of the producers who are experienced and skilled in the above department is 3 at present. It is needed to increase this number to 50 at the time that the full-scale operation commences either through intensive on-the-job trainings of existing personnel or by recruitment from other sources. Following 4 sources of recruitment can be identified as a sources of additional required manpower.

- Utilization of persons who have already received a certain training in Japan and in South American countries in the field of program production.

Table 2.1.4.1 is the list of personnel who received a certain training of TV program production in Japan and in South American countries. Of these personnel, 10 persons among 20 are having a positions in the Teleducation Department at present, other 10 persons have left the MEC and have their jobs in the private production companies, private broadcasting companies, newspaper companies, or self-employed. It is confirmed that a certain number of persons who at present out of the MEC showed a interest to work in the operation entity if created for the national educational TV broadcasting services.

It is estimated that the necessary period to create a core group (10 persons or more) for the program production would be around 3 month through the training of such available persons including presently available 3 producers. In addition to this group, a newly trained personnel is needed to fill the balance, however, it may need a year or more for their training.

- Universities

A sources pointed out for filling of balance is the graduates of the Mass-media Course, Faculty of Philosophy in the Catholic University in Asuncion. In this faculty, the major subject of the course is a news paper, however, this university has already had a consultation with the Teleducation Department to create a new course relevant to the educational TV program production. And in fact, a certain draft of agreement has been already prepared. In accordance with this draft agreement, the theoretical subject is planned to be undertaken by the Catholic University and the training of student through an actual works is planned to be undertaken by the Teleducation Department in cooperation of these two organizations. This program is planned to be realized from 1993. If this program is implemented the number of available employment per year could be estimated as around 10.

Table 2.1.4.1 List of Personnel Received Training for TV Program Production

EX-BECARIOS DEL DEPARTAMENTO DE TELEDUCACION.

No.	NOMBRES Y APELLIDOS	ESPECIALIZACION	TRABAJO ACTUAL
1.	BENTA DELGADO DE RAMIREZ.	Material Impreso. (Colombia).	Jubilada.
2.	DAISY LOPEZ DE VALINOTTI.	Producción T.V. Educativa. (Brasil).	Teleducación.
3.	DANIEL IGNACIO RAMIREZ.	Gerencia T.V. (NHK - Japón)	Teleducación.
4.	FEDERICO RAMON OSORIO.	Producción T.V. Social Educat. (NHK - Japón)	Teleducación.
5.	FANNY I. ROLON FILARTIGA.	Taller. Producción T.V. (Perú).	Particular.
6.	GRACIELA R. GLIZT R.	Tecnología Educativa. (México).	Jubilada - Contratada.
7.	GLORIA MAZZO TIOZO.	Taller. Evaluación de Matemáticas por Radio. (Nicaragua).	M.E.C.
8.	JOAQUIN A. POLITEC SMITH.	Material Impreso. (Colombia).	Teleducación.
9.	JUHO PENA.	Producción T.V. Educativa. (NHK - Japón).	Diario HOY.
10.	JUANA B. GOMEZ DE BENITEZ.	Ingeniería Producción T.V. (NHK - Japón).	Teleducación.
11.	SATORU MANABE SUENAGA.	Producción T.V. Educativa. (NHK - Japón).	Teleducación.
12.	LIDIA T. LOPEZ GAONA.	Producción T.V. Educativa. (NHK - Japón).	Teleducación.
13.	MARIA ZULMA HEREBIA DE NOGUERA.	Ingeniería en Sonido. (NHK - Japón).	Teleducación.
14.	MARIA EUGENIA M. DE MIRANDA.	Currículum. (Venezuela).	Teleducación.
15.	MARTA ELIZABETH DUARTE.	Producción T.V. Educativa. (NHK - Japón).	Teleducación.
16.	PEDRO RAMIREZ.	Taller. T.V. Educativa. Edición. (Bolivia).	Teleducación.
17.	RAMONA ORTIZ DE VELAZQUEZ.	Tecnología Educativa. (Brasil).	Teleducación.
18.	REINALDO MARTINEZ.	Producción T.V. Educativa. (NHK - Japón).	Canal 13.
19.	VICTORIA RICCARDO V.	Cámara. (NHK - Japón).	Particular.
		Producción T.V. Educativa. (NHK - Japón).	Jubilada.
		Producción T.V. Educativa. (NHK - Japón).	R.M. Producciones.
		Producción T.V. Educativa. (México).	Teleducación.
		Producción de Slide. (NHK - Japón).	

OBS.: Los funcionarios del Dpto. de Teleducación, participaron de los cursos de Imagen Fija y en Movimiento para Televisión Educativa y Tecnología Educativa, organizados por el IICE en el éfc 1987; fueron dictados por Expertos mexicanos en Paraguay

- Private institute for the program production

A private institute namely IPAC (Instituto Profesional de Artes y Ciencias de la Comunicacion) was established in 1990 in Asuncion aiming to conduct vocational training of program production techniques including the works of TV producers, camera, lighting, sound etc. through 3 years of the Audio-visual Media Course. The teachers or instructors are of present acting staff working in the commercial TV stations in the relevant specialized field of works and some experts of movie production. A certain number of graduates can be available to be employed as a program production staff.

- Teachers and graduates of ISE

In addition to these resources, the other sources of the program producers are the present teachers and the graduates of the ISE. The teachers and/or the students who are trained to be qualified as teacher have a fundamental or specialized knowledge about education and dedication to the education in general. It is, therefore, commensurate with the required works to prepare scenario and the outline of programs.

ii) Nature of capability required for program producers

The natures of capability required to become a program producer are ability of presentation, planning, commanding, negotiation, etc., gained from the experiences based on a general educational background of a certain educational level. Of course, the knowledge and technical ability concerned of the program production mentioned above is necessary, however, such ability would be educated through on-the-job training. From this point of view, in the case of selecting the personnel to be trained as the program producers, it is not needed to limit the source of such personnel to be from the graduate of the faculty of philosophy or culture but the faculties of arts, science, engineering, etc., also can be considered as a source of such personnel.

In sum up, the most important elements of the selection of the personnel for the program producers is the dedication of the person to become as a program producer or not. The evaluation of the persons, in this point of view, could only be possible through the on-the-job training. Adding the experiences on such selected person could be an exclusive factor to train such person to be as a professional program producer. In fact, even the commercial TV stations in Asuncion select a number of candidates from the part time workers of the university students and train them in the foreign countries. This implies that the source of the possible personnel required in number and in quality to implement the recruitment and training are secured.

iii) Source of recruitment of technical staff

As for the program production, a number of technical staff is required to work in cooperation with the program producers. The technical directors (TD) who supervises the production of programs from a technical aspect, the video engineers (VE) who undertake the control of portrait of camera, video, etc., the sound mixers who undertake to record the sound and the lighting man are categorized as the technical staffs for program production.

The number of technical staff estimated for the operation of the national educational TV broadcasting services (including a preparatory stage) is around 80~100. At present, although the number is quite limited, around 10 persons specialized technically in this field of works are available at the Teleducation Department. Therefore, around 70~90 persons are to be recruited to fill this gap. The required qualification of such personnel is an electronic technician or engineer who master the techniques concerned to the television. The sources identified for recruitment of required personnel are the ANTELCO, IPT, SNPP and other vocational training centers or IPAC.

c) Transmission of programs

The number of qualified personnel although they are not specialized for the transmitters or related equipment of the TV broadcasting operation, are available only from the ANTELCO as a source of required manpower for transmitting operation of programs.

2.2 Organization Plan

2.2.1 Organization Structure

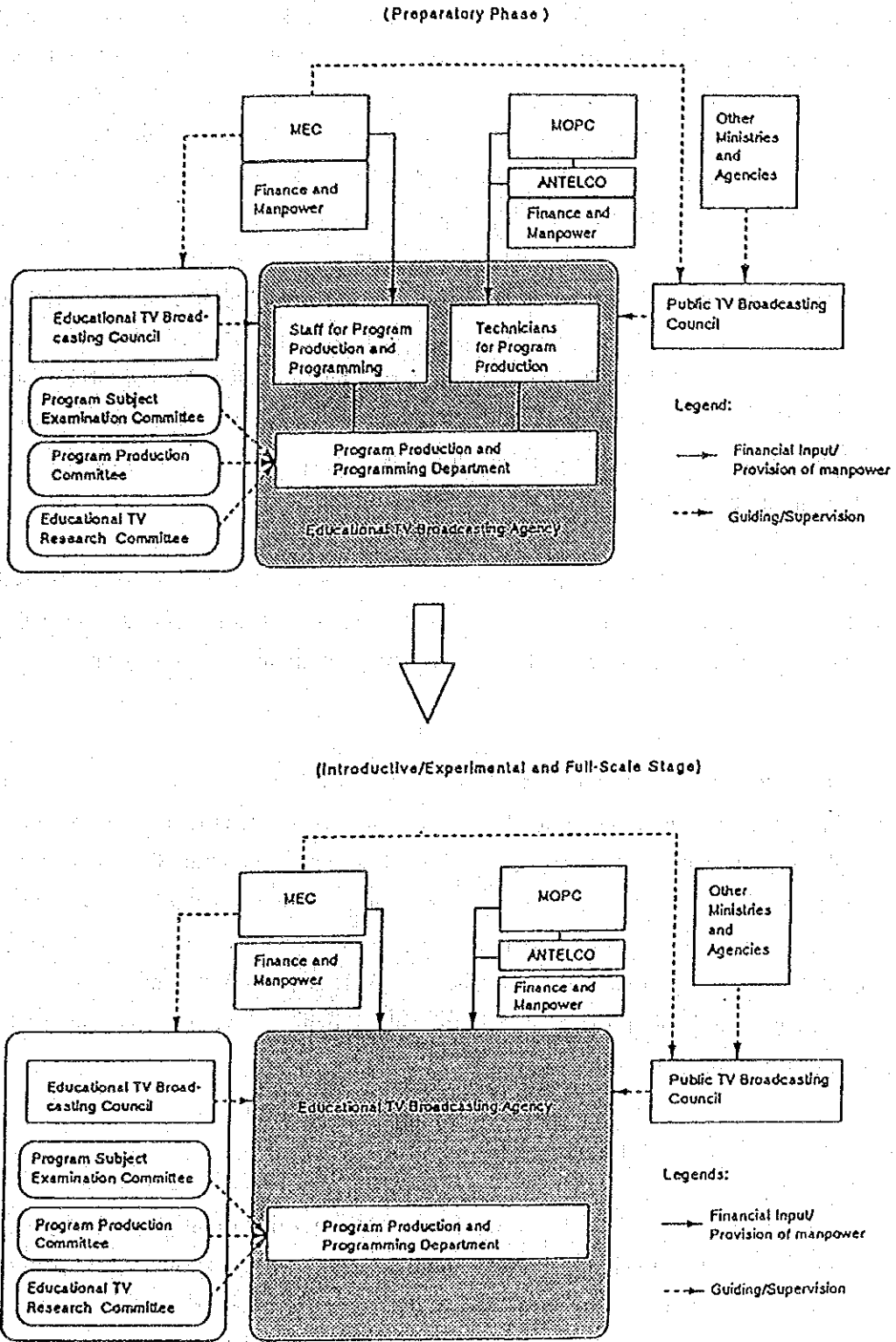
As discussed in previous Chapter 2.1.3 (3) "Organizational Plan Policy Framework", the most appropriate organization to undertake the educational TV broadcasting services planned herein should be of an independent public corporation based on an amalgamation of part of two concerned ministries i.e. the MEC as one part and the MOPC as the other part to achieve the objectives of the educational TV broadcasting network envisaged hereto in most effective manner by a utilization of existing financial and human resources as much as possible.

The subject organization is planned to be developed briefly in two phases as mentioned below in accordance with the progress of the phased development scheme scheduled herein.

At the beginning of phased development scheme (preparatory phase) of the educational TV broadcasting services, two concerned ministries will establish jointly a new organization authorized by each ministry at the ministerial decree level to achieve the objectives identified in this plan. This newly established organization aims to serve as a tentative organization as a foundation for subsequent establishment of organization which is planned not only for experimental/introductory phase but also for full-scale phase. As the activities of the organization expands and most of concerned personnel are trained and become familiar with the required skills and techniques at satisfactory level, the organization structure is planned to be evolved into and reformed to an public corporation (quasi-government organization) which is authorized by the parliament and approved by the President of the country before the commissioning of educational TV station.

The conceptual frame of above mentioned organizational structures are shown according to phased organizational development scheme in Figure 2.2.1.1 "Conceptual Frame of Organizational Structure".

Figure 2.2.1.1 Conceptual Frame of Organizational Structure



2.2.2 Administrative Structure

The major obligation mandated to the undertaking organized as planned herein are clearly identified in previous section as to produce proper programs and broadcasting of those in order to improve a quality of school education and education in general by an utilization of educational TV broadcasting services and incorporation of educational TV program into school education system. Realization of effective promotion as well as expansion of social education is other identical obligation of the undertaking.

The undertaking planned to be organized as an executing body should be of an independent public corporation, however, it should be connected administratively with MEC who supervises and administers the education sector with regard to the governmental educational administration and should be directly guided and controlled by the MEC with respect to production of program related to school education.

More over as the operation of the undertaking quite concerns to public interest, it should be planned to be supervised indirectly under related government administration bodies from the government administration view point.

Taking these into consideration, 2 councils having functions to liaise between this undertaking and the MEC as well as related governmental administration bodies, namely (I) Public TV Broadcasting Council and (II) Educational TV Broadcasting Council are planned to be organized to maintain administrative and functional relationship among concerned bodies with respect to broadcasting services. Figure 2.2.2.1 "Overall Organization Chart" shows organization plan and an organizational relationship of these councils and the undertaking planned herein.

(1) Public TV Broadcasting Council

As the contents of program dominates the quality of educational program aims at improvement of quality of education and social affairs, the programs should be produced in accordance with established program production standards, stipulation, rules and guidances. The quality control of programs produced by the undertaking should be supervised by the organization

specifically organized outside for the undertaking to achieve the major objectives.

The meeting or conferences of these councils are planned to be held periodically (Quarterly, annually, and at each 5 years) and from time to time when required to prepare operation policy of public TV broadcasting service, to establish quality standards, and to discuss matters related to program production, program planning, etc., through an exchanging of opinions of representatives from different field of activities, collection of demands, requests, etc., This council may be composed of representatives of several government organizations and agencies relative to different field of activities and their objectives.

(2) Educational TV Broadcasting Council

This council is planned to be organized for a formulation and determination of various policies concerned to an improvement of education through an utilization of educational TV broadcasting services, a preparation of long, middle and short term instructions for educational program production, identification of roles of educational TV broadcasting services and establishment of a criterion with regard to program production. In addition to these, this council prepares instructions and supervise program production in general in line with essential points related to education.

More over, this council coordinates, in accordance with a guide line of education, a preparation of text materials which is indispensable to conduct educational TV broadcasting service.

This council is planned to be consisted of representatives of the MEC, organizations concerned to social development, church, the ISE, Regional Education Center (CREs), distinguished persons of learning and experiences, etc.

This council is regarded to be an organization substantially to guide and supervise educational TV broadcasting services from the government administrative view point especially in the field of education. With respect to a concrete and a definite program production and program planning in details, following 3 committees are planned to be formed specifically for a selection of teaching subjects; determination of contents of programs; and means of

utilization system, evaluation of broadcasted programs and feeding back of analyzed effects. These committee are planned to be attached to the Program Production and Programming Department formed within the organization structure of the undertaking responsible for program production and programming as a body having a staff function to support this department from time to time.

1. Program Subject Examination Committee
2. Program Production Committee
3. Educational TV Research Committee

The outline of these committees and their roles and functions are as follows:

(a) Program Subject Examination Committee

This committee is composed of staffs of the MEC relative to each subjects to be examined, staff of Teleducation Department, school teachers, distinguished persons of learning and experiences, and its role is to examine selection of subject of program and content of subject, target school year, etc., to supervise production and programming of programs.

(b) Program Production Committee

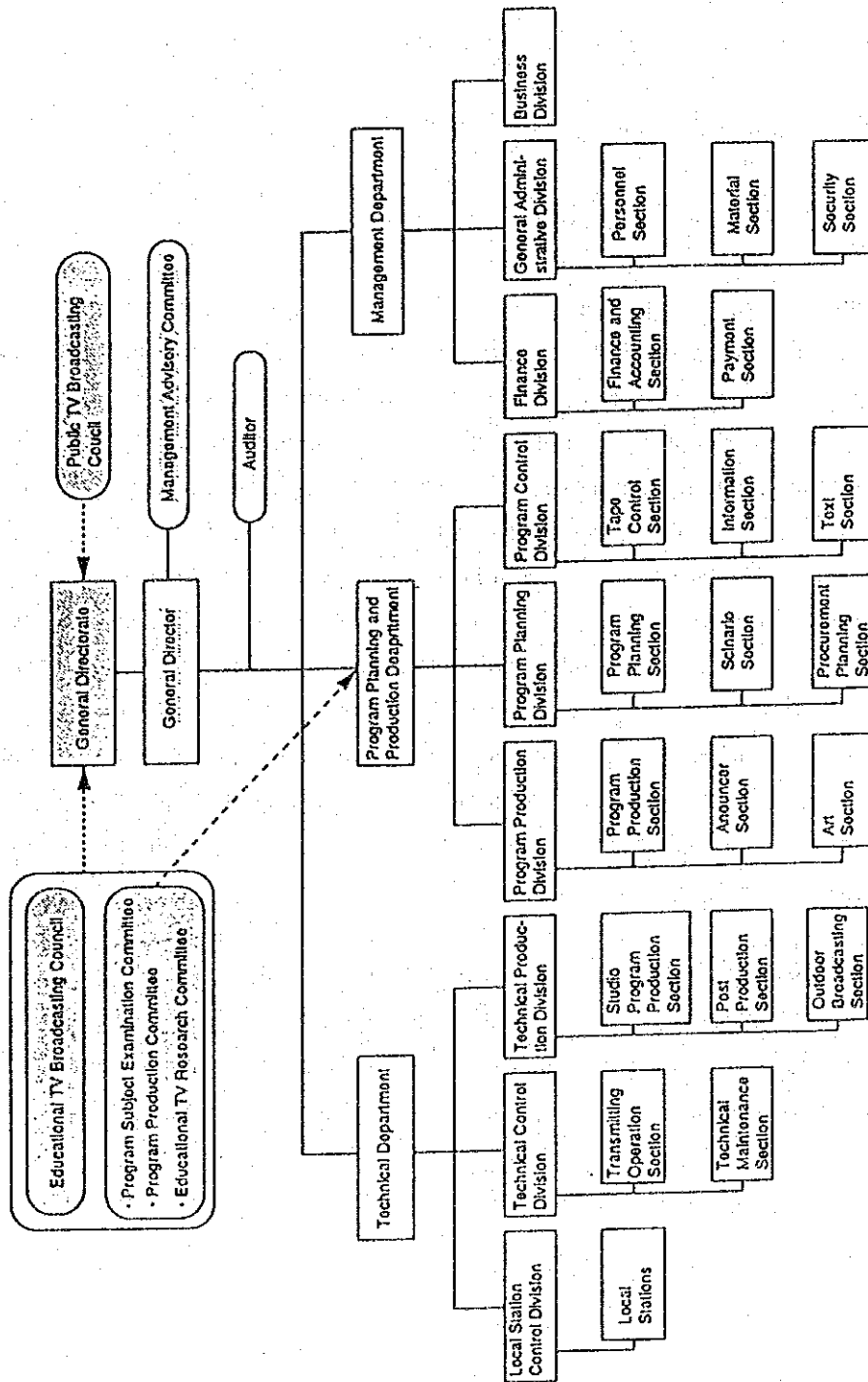
This committee is composed of staffs of the MEC relative to each subject, staff of Teleducation Departmen, school teachers, lecturer scheduled to appear in subject program, producers in-charge, technical staffs, etc., to prepare a program production plan through an examination of teaching subject, materials, contents and composition of program.

(c) Educational TV Research Committee

This committee is composed of staff of the MEC, staff of Teleducation Departmen, school teachers, staff of the CRES, church, etc., for monitoring, analysis and evaluation of planned/ broadcasted programs aiming at promotion and increased efficiency of educational TV

broadcasting service. This committee undertakes also monitoring, data collection, analysis, evaluation, etc., on educational TV program in rural areas aiming mainly to promote education by utilization of educational TV broadcasting services. Such activities are planned to be conducted by CREs chiefly.

Figure 2.2.2.1 Overall Organization Chart



2.2.3 Outline of the Organization

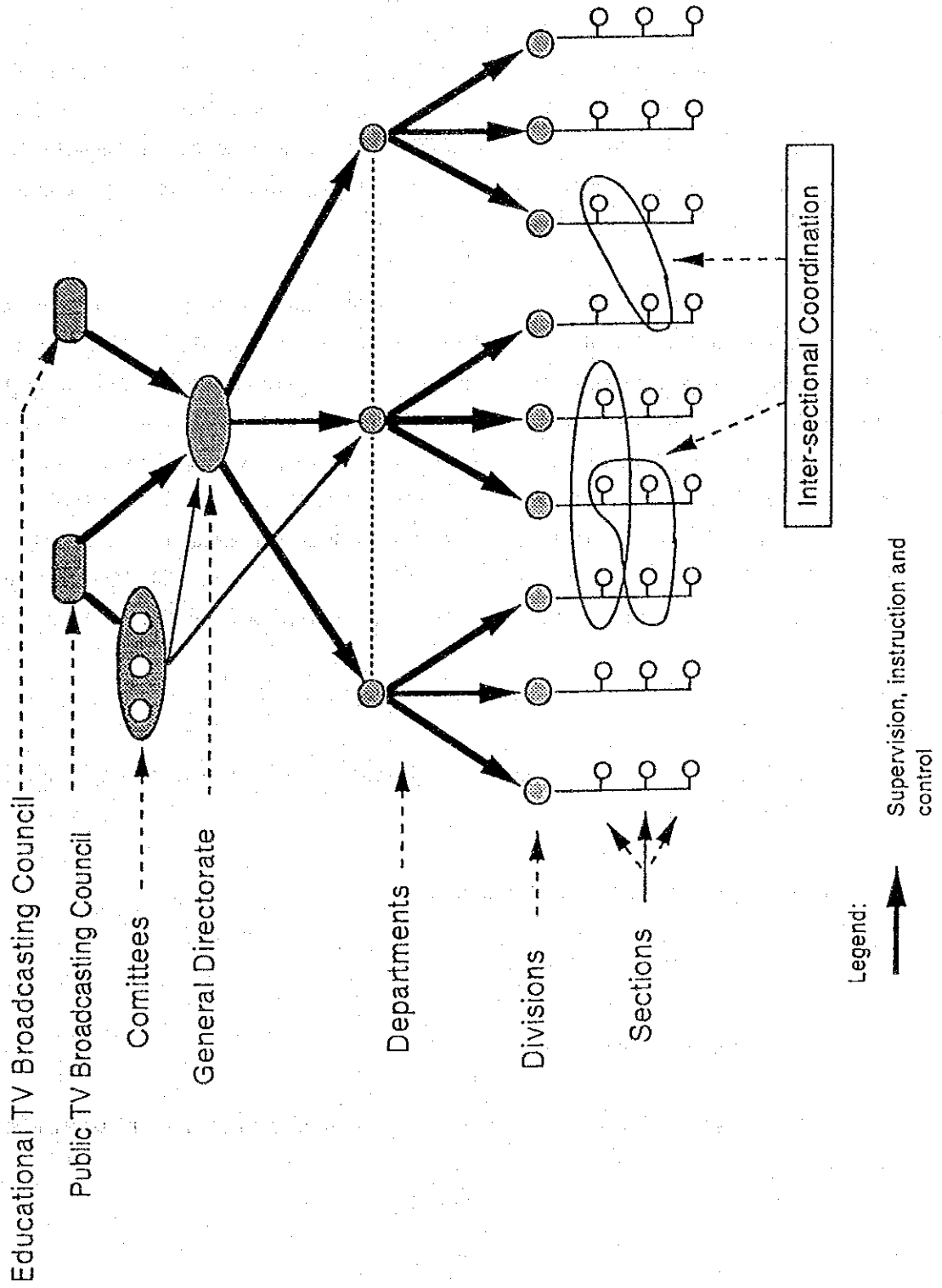
The elements of organization for the operation and management of the educational TV broadcasting services can be divided in 4 managerial functions as follow:

1. Top management of organization
2. Program production and management
3. Technical management
4. Administrative management

Figure 2.2.3.1 illustrates the frame of the controlling system of the organization conceptually. As shown therein effective organizational control is planned to be attained by controlling maximum 3 managers of lower level sections by one manager of upper level of the organization. This principal of organization structure assures an effectivity of organized activity by identifying the roles and the given responsibilities of each organization clearly. Although a team work is the most important element to produce high quality programs in television broadcasting service, a cooperation work limited to section level may introduce a confusion. Taking this into account, all the cooperative works required is planned to be controlled at the level of department so as to enhance an effectivity of the team works among various divisions and sections. In addition to this, an excessive obligation to personnel management capability of one identical management person may be reduced by limiting a maximum number of control objectives to 3.

However, in the field of program production, a group or a team consisted of a number of professionals and experts in different fields are planned to be organized to carry out given jobs independently so as to enhance manuverbility as much as possible.

Figure 2.2.3.1 Conceptual Frame of Organization Control System



2.2.4 Brief Job Descriptions

Relevant job descriptions of each department are outlined briefly below:

(1) General Directorate

General Directorate is supervised under the operation administrative committee for the educational TV broadcasting services which is composed with representatives of the MEC and the MOPC; and Educational TV Broadcasting Council organized externally. The supportive organization formed externally are discussed in the previous part of this chapter.

General Directorate manages, supervises and controls whole organizational activities of the organization at a top management level with external support of various external councils and committees formed under the supervision of relevant ministries and agencies. The Advisory committee composed with different professionals and advisors is planned to be attached to the General Directorate to support a top management of the organization periodically. This General Directorate supervises (1) Program Planning and Production Department, (2) Technical Department, and (3) Management Department. Structural outline, functions, responsibilities, job description, etc.

(2) Program Production and Programming Department

This department is responsible for production of programs and composed of following divisions:

1. Program Production Division
2. Program Planning Division
3. Program Control Division

A brief description of jobs undertaken by each divisions mentioned above are as follows:

1) Program Production Division

This division is formed with 3 specialized sections as (a) Program Production Section, (b) Announcer Section, and (c) Art Section.

This division undertakes production of programs by teams of different professionals under a supervision and control of the department manager. The roles and functions of the above mentioned sections are as follows:

(a) Program Production Section

This section is composed of number of program directors and their assistant directors who are directly responsible to direct production of programs including detailed plans of program production.

(b) Announcer Section

This section is composed of announcers who works as a caster of the program.

(c) Art Section

This section is composed of staffs to prepare set and graphics for program production supported by professionals for make-up of announcers, casters and other persons appear in the program, and staff to plan and procure necessary materials for program production.

2) Program Planning Division

This division is responsible for and undertakes planning and preparation of scenario of the programs in accordance with program producers designated to work for production of planned programs.

This division is formed with 3 specialized sections such as (a) Planning Section, (b) Editing Section, and (c) Procurement Planning Section. The brief job descriptions of these sections are as follows:

(a) Planning Section

This section undertakes a preparation of master program for the production of programs.

(b) Editing Section

This section undertakes an editing of programs planned to be produced by Planning Section. This section is composed of scenario writers and editors. Scenario of program planned to be produced will be handed over to Program Production Divisions.

(c) Procurement Planning Section

This section is responsible for procurement of materials required for the program production. Materials to be procured are planned and demanded by Program Planning Section and Editing Section in association with program directors assigned for program planned to be produced.

3) Program Control Division

This division is responsible for and undertaking management of storing and picking out produced program stored for broadcasting as well as collection of information and materials necessary for program production. This division undertakes also preparation and printing of teaching materials for educational TV broadcasting program.

This division is formed with (a) Tape Control Section, (b) Information Section, and (c) Text Printing Section. The brief job descriptions of these sections are as follows:

(a) Tape Control Section

This section stores produced programs in order to be used for broadcasting in accordance with pre-determined schedule for broadcasting.

(b) Information Section

This section collects information/data and materials to be used for program production.

(c) Text Printing Section

This section prepares various type of texts of which drafts are prepared in conjunction with Program Planning Division.

(3) Technical Department

This department is responsible for production of programs technically and transmitting produced program and composed of following divisions.

1. Program Production Technical Division
2. Technical Management Division

A brief description of jobs undertaken by each division mentioned above are as follows:

1) Program Production Technical Division

This division is formed by a number of professional groups consists of technical personnel required to produce program under the direction and supervision of program direction supported by floor directors of Program Production Section.

A professional technical group is basically composed of following experts:

VE switcher
Cameraman
Voice Operator
VTR Operator
Lighting Operator
Assistant staff

2) Technical Management Division

This division is formed with 3 specialized sections as (a) Transmitting Operation Section, (b) Central Maintenance Center, and (c) Local Station Section.

This division undertakes transmitting programs and maintain whole equipment composing a broadcasting network. The roles and functions of above mentioned sections are as follows:

(a) Transmitting Operation Section

This section is composed of professional staff for operation of transmitter and mixing process.

(b) Central Maintenance Center

This center is composed of professional staffs for maintenance of different group of equipment for transmission, program production in studio and outdoor operation, as well as video tape recording. This center covers the maintenance requirement of whole equipment and facilities of TV station. The equipment of local stations and repeaters are maintained by group of engineers and technicians centrally controlled by this center.

(4) Management Department

This department is responsible for administration and management of organization under the direction of top management and is composed of following division.

1. Finance Division
2. Administration Division
3. Business Promotion Division

A brief description of jobs undertaken by each divisions mentioned above are as follows:

1) Finance Division

This division is formed with 2 specialized sections as (a) Finance Section and (b) Accounting Section.

This division undertakes financial management, accounting, taxation, contract management, etc. The roles and functions of the above sections are as follows:

(a) Finance Section

This section is composed of financial management specialists, contract management specialist and financial controller. The roles of this section is to estimate financial needs and establish financial schedules for operation of the undertaking.

(b) Accounting Section

This section is responsible for accounting, collection and payment of moneys for operation of the undertaking.

2) Administration Division

This division is composed of (a) Personnel Section, (b) Material Section and (c) Security Section; and undertakes all general administrative matter of the organization. The roles and functions of these sections are as follows:

(a) Personnel Section

This section administers all matter concerned employment, training and insurance of employees.

(b) Material Section

This section prepares a periodical procurement schedule for major materials required to produce planned programs. The contents of materials to be procured is planned and coordinated with persons in charge of program production.

(c) Security Section

This section is responsible for security of building, facilities, personnel, etc., attached to the undertaking.

2.2.5 Management Plan

The contents of program will become complex and volume of operational activities will increase as phased development scheme proceeds. Relative financial sources will also change according to the progress of phased development scheme of organization as mentioned in previous sub-chapter 2.1.3 "Basic Policy on Operation and Management Plan". The management plan of the undertaking is outlined below in accordance with relative stages of phased development scheme. The progress of development plan can be divided into 3 phases as follow:

1. Preparatory Phase
2. Experimental/Introductory Phase
3. Full-scale Operation Phase

(1) Preparatory Experimental Phase

During these stage experimental program production is planned to be carried out using relatively small scale facilities without having a facility for TV broadcasting.

At first, the undertaking will be formed legally and staff will be organized by the MEC and the MOPC jointly as mentioned in previous sub-chapter 2.2.1 "Organization Structure" for operation of the undertaking during this phase. A

framework and relationship with external organizations (councils, committees, etc.) of the undertaking at this phase is a concrete one and continue even at subsequent experimental/introductory phases as well as full-scale operation phase. The undertaking formulated at this phase will be changed to organization commensurate with required activities of subsequent full-scale phase legally without substantial change.

Through the proceed of these phases, the organizational frame of educational TV broadcasting services will be completed, organizational systematic activities will be conducted, management experience will be gained.

(2) Introduction Phase

When a stable TV broadcasting service become available in view of organization, technical skill and administrative performance, the legal status of the undertaking is planned to be changed from joint operation body of two ministries to an public corporation independent from administrative structure of both ministries. All staff composing the undertaking is planned to be transfered to the organization having new legal status.

When the undertaking owns own TV broadcasting station and expanded studio for program production, the introduction phase begins. During this phase, a TV broadcasting of produced programs will commence and such educational program will be incorporated into school education in real earnest. The monitoring and evaluation of broadcasted program will be executed through a number of experimental broadcasting services of educational program enables an improvement of contents of program. In this phases, experimental production and broadcasting of the government public advertisement and commercial advertisement for private interest will be conducted.

(3) Full-scale Phase

The program production and broadcasting of programs will be conducted on full-scale level when a broadcasting network is completed and population coverage increases substantially. At this phase, number of staff will be increased matching to increased volume of activities on top of staff who are trained and form a core of organization through previously proceeded preparatory, experimental and introduction.

A major portion of budgetary or financial resources designated to operate the undertaking in this phase is the government budget allocated for both ministries concerned. Although the volume of expected income from the program production and distribution for the government public advertisement is limited, program production may become easier as the usage of such revenue is not restricted at all unlike a government budget. When the ability of program production increased substantially sufficient to utilize a time frame for free plan program and sports program on Saturday and Sunday, a number of commercial advertisement of private interests is planned to be broadcasted within predetermined time limit. Revenue from such private commercial advertisement can be regarded as the third source of income for the undertaking.