

**WORKING DRAFT**  
**FORMULA FUNDING**  
**EDUCATION BRANCH**  
**INDIAN AND NORTHERN AFFAIRS CANADA**  
**REGIONAL DIRECTORS GENERAL REPORT**

**CHAPTER 1            PURPOSE AND FEATURES**

**1.1            Purpose for Development of Formula Funding Approach**

Federal departments have a clear responsibility to develop and implement program resource projection models that meet Treasury Board requirements. Such models must detail and justify resourcing requests consistent with principles of efficiency and effectiveness. Both the data and the resourcing process must be acceptable to the Treasury board and must generate adequate resources for program delivery.

Resourcing for the Education Branch of Indian & Northern Affairs has in recent years been carried out through a process known as "Data Base". The data base system has become increasingly ineffective as a resource projection model and Treasury Board instructed the Department to develop a new resourcing model for the Indian Education planning element.

The resource projection model is a comprehensive approach to resource projection for the Indian Education planning element. Accordingly it encompasses the four sub-planning elements - elementary/secondary education, post-secondary education, activity management and other services.

The formula funding approach represents the development of a major component of the comprehensive resource projection model.

**1.2            Features of the Formula Funding Approach**

Formula funding is a unit (number of students) times unit cost (tuition rate) approach for determining the resource requirements for instructional services. It is sensitive to a number of factors including geography, school and class size, and curriculum offered all of which affect the level and quality of the education program at the school. Adjustment factors take into consideration provincial approaches for resourcing school boards.

In addition to providing a sound base for resource projection for elementary/secondary instructional services, it is the intention of the department to utilize the formula approach as the basis for allocating resources.

The funding formula will facilitate and aggregated costing for a number of existing services within education's largest sub-planning element, elementary/secondary education. The services included within the scope of the formula are essentially those related directly to the delivery of instructional services. With the exception of facilities maintenance, the formula approximates services normally considered within a tuition charge.

This approach to resource projection for a major portion of elementary/secondary services is consistent with the approach used by provinces to project their requirements for the funding of school boards.

The funding formula is structured according to a set of principles (detailed in Annex A) consistent with the objectives of the department's elementary/secondary program. This clear link with the objectives of the program is required to make the formula a useful funding mechanism able to meet the disparate

needs of the various regions of this country.

**RESOURCE PROJECTION METHODOLOGY  
DEVELOPMENTAL PRINCIPLES**

**2.1 Rationale**

The resource projection methodology has been developed according to a set of principles which support the objectives of the department's elementary/secondary program. This clear link with the objectives of the program is required to make this approach a useful funding mechanism to accurately project requirements to meet the disparate needs of the various regions of this county.

**2.2 Resource Base**

The resource projection methodology does not address the issue of program enhancement. It is a tool for resource projection at existing levels of service delivery.

**2.3 Principles**

**2.3.1 Equity**

The resource projection methodology must be, and must be perceived to be, fair and equitable.

**2.3.2 Sensitivity**

The resource projection methodology must take into account differences affecting individual schools including geographic, demographic and educational characteristics.

**2.3.3 Efficiency**

The resource projection methodology must encourage the most efficient use of funds.

**2.3.4 Effectiveness**

The resource projection methodology must support an effective and appropriate level of programming at the school level.

**2.3.5 Administrative Viability**

The resource projection methodology must support any Treasury Board approved resource projection model, and be useful as an allocation tool for the department.

**2.3.6 Unconditionality**

Within the parameters of education program standards, the resource projection methodology should not define the specifics of individual band education budgets. Resourcing and allocations should reflect the objectives, priorities, and policies of the education program.

**2.3.7 Autonomy**

The resource projection methodology must support the government policy of local control and local autonomy.

**CHAPTER 3****SCOPE****3.0 Scope of Services**

Not all elementary/secondary services funded by the Department are included in the formula. Details of services included and excluded from the formula follow.

**3.1 Elementary/Secondary Services Included in Formula:**

Planning Variable No. 6130  
Federal Operated Schools

<u>Service Code Number</u>	<u>Description</u>
6015	a) Admin Support b) Other Service Cost
6016	a) Teachers b) Substitute Teachers c) Education Leave d) Professional Development e) Travel & Removal
6017	Paraprofessionals
6018	a) Native Language Instructors b) Other
6019	Instructional Supplies
6020	Student Supplies
6021	Instructional Equipment
6022	Curriculum Development
6024	Special Education
6056	a) Staff Relating to Federal b) Other Service Costs
6061	Boards/Authorities Committees - Federal

Planning Variable No. 6110  
Band Operated Schools

6001	a) Teachers b) Paraprofessional c) Administrative Support d) Other Services e) Professional Development f) Education Leave g) Cultural Education
6003	Special Education

6060	a) Advice and Assistance
	b) Other Costs
6063	Boards/Committees/Authorities - Bands

### 3.2 Elementary/Secondary Services Excluded from Formula: Planning Variable

<u>Service Code Number</u>	<u>Description</u>
6120	Instructional Services - Provincial Schools
6140	Student Accommodation Services
6150	Student Transportation
6160	Student Financial Services
6170	Guidance & Counselling I Elementary/Secondary
6180	Instructional Support Services - Provincial Schools
6002	Facility Rental for Education Purposes

## CHAPTER 4 METHODOLOGY

### 4.1 Basic Calculation

The formula is calculated in its simplified form as the multiplication of the number of units times the per pupil rate. This amount is increased by the administrative system allocation and reduced by all applicable offsets to arrive at a per school calculation.

(Units x Per Pupil Rate) plus system allocation minus Federal Offsets

Each element of the formula is defined and described below.

### 4.2 Formula Components

#### 4.2.1 Units

Units are expressed as Full Time Equivalents (FTE). The FTE concept provides a method of calculating full time equivalency for students who are funded on a part time basis. This includes kindergarten students who attend school on a half time basis and high school students enrolled on a part-time basis. The nominal roll is used to determine the full time equivalents.

#### 4.2.2 Per Pupil Rate

Per pupil rate is determined by multiplying the sum of the national per student base and incremental student allocation by the school adjustment factors. The school adjustment factor is the sum of the applicable adjustment indices described below.

Non-Adjusted Base Rate + Incremental Student Allocation x Adjustment Factor

##### 4.2.2.1 Non-Adjusted Base Rate

The non-adjusted base rate provides the basic funding unit cost for the formula. It includes the majority of the formula services including teacher salaries, books and supplies, instructional materials and core curriculum requirements.

It may also be described as the student base rate.

#### **4.2.2.2 Incremental Student Accommodation**

In addition to the non-adjusted base rate the formula provides an incremental student allocation which is non-adjusted and which provides for native language instruction, for low cost special education and for second level services.

##### **4.2.2.2.1 Native Language Instruction**

This component provides funding to cover the cost of native language instruction. The formula utilized by the Ontario Ministry of Education was used as the basis for determining the unit cost for this component. This increment provides funding for a fully qualified teacher for every 200 pupils. This ratio is considered to be an acceptable workload for a language teacher.

##### **4.2.2.2.2 Low Cost Special Education**

A number of students require special education services which normally can be provided directly by the school, or alternatively be purchased from another educational institution. Funds provided by this component are intended to meet this special need. It is understood that expenditures related to low cost special education apply to a targeted student group rather than to the total student population.

The allocation is based on the full time equivalent enrollment in respect of the pupils within the school jurisdiction with the exception of those resourced through high cost special education. The rate is comparable to that provided by several provinces.

##### **4.2.2.2.3 Second Level Services**

Most schools receive supervisory and consultative services from outside sources. These services are generally referred to as second level services. Since these have a direct bearing on the total cost of education, they have been included in the overall per pupil calculation.

The allocation amount per pupil is based on equivalent amounts provided by school boards for these services.

##### **4.2.2.3 Adjustment Factors**

Adjustment factors are designed to recognize the significant differences between schools and communities. These adjustment factors bring a strong measure of vertical equity to the formula by recognizing, through increased funding, the uniqueness of communities and schools due to geography, population and curriculum. This adjustment is not, nor is it intended to be, a comprehensive accounting of all possible variables. Rather it is a recognition of the most readily identifiable, and defensible cost differentials.

##### **4.2.2.3.1 Geographic Indices**

The geographic location of a school affects the cost of service delivery in general and the costs associated with the operation of the school in particular. These costs can include transportation for goods and supplies, additional costs for the provision of second level consultative services, travel for staff, increased recruitment costs due to staff turnover rate, higher cost of living and the need to pay isolated post allowances in order to attract and retain staff. Not all these costs however, are affected by geography. The base teacher salary amount, which is the largest single component in the student base for example, is not altered by virtue of the community's location.

The combination of cost sensitivity and a recognition of increased costs associated with other geographic impact results in a requirement to provide an adjustment to 50% of the student base. INAC Band Support & Capital Management Directorate has developed and implemented geographic indices to adjust for cost differentials incurred by reason of geography. Each community has been assessed against the established criteria for remoteness and environment and has been assigned its weighting factor.

Program Circular D-6 details the application of the geographic classification. This adjustment is applied to 50% (30% cost sensitivity + 20% increased costs) of the student base and the incremental allocation on a school by school basis.

#### **4.2.2.3.2 Small School Factor**

Given the diseconomy of scale associated with the operation of small and medium sized school systems, the small school factor has been designed to recognize the additional costs directly related to the total student population served and the grades taught. It should be noted that this factor is not intended to offset all the incremental costs associated with the operation of a small school system but is designed to supplement the Administrative System allocation.

Consistent with research and implementation by the Province of Saskatchewan, the small school factor is applied not simply in recognition of the total school population but rather based on the average number of pupils per grade. It is applied for all schools including those which do not qualify for the Administrative System Allocation.

The adjustments calculated on the average number of students per grade are:

5	Students or less per grade	.05
6-10	Students per grade	.025

#### **4.2.2.3.3 Second Official Language**

The provision of instruction in a second language is a cost incurred by many schools (notably in the Quebec Region) which in many instances provide trilingual education. The second official language factor recognizes the extra costs incurred and is included only where second official language instruction is taught.

The weighting of this factor is based upon a per pupil equivalent of the level of funding provided by the Secretary of State to provincial ministries of education for second official language instruction.

The Secretary of State's current formula provides funding for each elementary and secondary FTE pupil enrolled in a second official language instruction program. To be eligible for funding, students must receive instruction in a second language 100% of the regular instruction time.

The per pupil rate is adjusted by a factor of .05.

#### **4.2.2.3.4 English as a Second Language (ESL)**

The ESL factor is provided to schools where the primary language of instruction in the school is different from the first language of the majority of the student population.

Provincial ministries also recognize that ESL results in increased education costs. These additional costs may include extra texts, additional classroom assistance, and specialized

teacher training.

The actual weighting factor utilized was based on the province of Ontario factor. This provides an adjustment of .05 to the per pupil rate.

#### **4.2.3 Administration System Allocation**

There are many administrative costs associated with the operation of a school system. Those associated with the band financial administration are funded through the Band Support funding program.

School administrative costs are funded in part through the student base and in part through this administrative system allocation.

Research into the formula approach showed clearly that there was a core of administrative costs which could not easily be accommodated solely within a per pupil rate. The per pupil allocation would not generate sufficient administrative funding. Therefore a system allocation was derived. It should be noted that this is an allocation directed to an education system and not to a school. A band or tribal council operating more than one school, for example, would only be eligible for one system allocation. This funding does not duplicate Band Support funding.

The system allocation is provided for education systems with an FTE enrollment of ten or more. This practice is consistent with the approved standards for the provision of educational facilities.

#### **4.2.4 Federal Offsets**

Resourcing for federal schools is achieved through both budget and person year allocation. Additionally there are a number of common services (finance, legal, personnel) that are available to federal schools directly. In order to calculate federal school budget entitlement, the budgetary equivalent of the person year usage and direct service provision has to be calculated. This equivalent amount is termed the federal offset and is deducted from regional allocations for federal schools because it cannot be discreetly identified with individual schools.

Federal offsets include three components - devolution offset, second level offset and teacher salary offset.

##### **4.2.4.1 Devolution Offset**

The devolution offset is calculated by applying the full formula as it relates to a specific community from which are subtracted the costs of the services provided through direct departmental programs for federal schools. The incremental costs, if any, would be covered by the "devolution pot" upon transfer to band operation.

##### **4.2.4.2 2<sup>nd</sup> Level Offset**

Services defined as second level include school supervisory and consultative services. These services are funded for federal schools through provision of person years at the district and regional level.

The federal allocation to regions is reduced by the salary dollars of the second level person years allocated to each region. Funding becomes available to band operated schools by the salary conversion from the regional 2<sup>nd</sup> level person year base. The regions will identify conversions as federal schools are transferred to band operation.

#### 4.2.4.3 Teacher Salary Offset

Funding for teachers salaries in federal schools is provided through the departmental salary allocation and is therefore deducted from the regional federal school formula allocation. This offset is calculated by deducting an amount equivalent to the salary component included in the formula base. The pupil enrolment is divided by PTR (17:1) to determine teacher entitlement. This figure is multiplied by \$47,074 the average level V year V salary and benefits (inclusive of IPA).

### 4.3 Specific Program Costs

#### 4.3.1 High Cost Special Education

High cost special education is referenced here for information purposes only. The decision has been made to resource high cost special education under a unique resourcing and management regime. Accordingly expenditures for high cost special education (approximately \$5.0 million) are not included as a formula service.

#### 4.3.2 Facility Rental

Facility rental had originally been included in the education program resource base. Because of the obvious link to capital facilities and maintenance, this service and the existing base of \$1,772.2 thousand will be transferred to Band Support and Capital Management and is therefore excluded from the formula.

## CHAPTER 5 RESOURCE BASE

The resource base for distribution by the formula is calculated on funding for formula services available in fiscal 1988-1989. The following represents the calculated base in 000's.

		As of April 1, 1988
5.1	<b>Resource Base</b>	
	Band-Operated Schools - Base	\$104,102.0
	- Incremental	3,100.0
	Federal Schools - Vote 5	7,300.0
	- Vote 15	11,770.0
	Teacher Salary	38,669.9
	- Conversion (88/89)	4,370.3
	2 <sup>nd</sup> Level - 50 PY's	2,050.0
	- Conversion - 54 PY's	2,296.0
	Frozen Allotment	6,000.0
	Incremental - 88/89 - 90/91	3,700.0
	- Future	6,800.0



\*Inclusive of High Cost Special Education and Facility Rental which will not be part of the formula base for 1989-1990.

## 5.2 Formula Components

An explanation of each of the above components which comprise the resource base is provided below.

### 5.2.1 Band Operated Schools reverse allocation

This represents the allocation presently available for the 1988-1989 fiscal year exclusive of the frozen allotment.

### 5.2.2 Federal Schools Federal (unlike provincial for Canadians)

This represents the total of both Vote 5 and Vote 15 funds available for federal schools for the 1988-1989 fiscal year exclusive of the frozen allotment.

### 5.2.3 Teacher Salary

This amount was calculated utilizing the individual regional average Level V Year V salary. This average was calculated inclusive of salary, benefits (based on 15.5% of salary), and IPA. The federal FTE units were used to determine the teacher entitlement based on the weighted PTR of 17:1. The salary component was the product of teacher entitlement and the regional average salary.

### 5.2.4 Second Level Services

Student Services are defined for the purpose of determining the resource base as person years whose functions include supervisory and consultative duties that are included in the formula. Included would be federal PY's for positions such as consultants and assistant superintendents of education. The established national 2<sup>nd</sup> level person year complement (base year 1985-1986) is 108. An average salary costing of \$35.0 was utilized with 15.5% benefits and appropriate IPA added.

### 5.2.5 Frozen Allotment

The current total frozen allotment for elementary-secondary is \$18,704.0. Commitments exist for \$10,704.0 for provincial tuition payments and \$2,000.0 for other non-formula costs including student transportation and student accommodation. The balance of \$6,000.0 is available for formula services.

### 5.2.6 Approved Devolution

The figure of \$3,700.0 represents the balance of the approved devolution funding for transfers between 1985-1986 to 1990-1991. This is the amount obtained by subtracting the total approved level less the transferred amount to September 1, 1988.

### 5.2.7 Future Devolution

The future devolution requirement was determined by calculating a per student cost for approved transfers for 1985-1986 through 1990-1991. This per student cost was then applied to federal schools after 1990-1991 to determine a cost for total devolution. This cost does not include unit cost increases and is in 1988-1989 constant dollars.

## CHAPTER 6

## APPLICATION

### 6.1

#### Trial Run

Attached is a copy of a trial run by region. The Regions are requested to review this trial run on a comparative and on an impact analysis basis. These reviews should be provided to Headquarters in advance of the October 1988 Regional Directors of Education meeting.

This report is an internal working document at this time. There is no objection to sharing the rationale and methodology with interested Indian groups as requested. However as the allocations to schools change with any formula revisions, it is advisable not to share the actual amounts generated by region or by school until the formula is finalized. This is particularly important with this run as the base includes high cost special education and facility rental which will be part of a separate management regime next fiscal year. This will reduce the formula base by approximately \$7 million.

The formula will be used as an allocation methodology for the upcoming fiscal year. During the period from the October RDE meeting and April 1, 1989 there will be ample opportunity for review and critique by Indian groups.

#### 6.1.1 Volumes

Volumes utilized in the trial run were calculated by adjusting the September 1987 Nominal Roll actuals (far right column) by a 2% growth factor.

#### 6.1.2 Resource Base

The trial run formula resource base \$192,229.3. A description of the resource base construction can be found in 5.1.

**FORMULA FUNDING**  
**FEDERAL AND BAND-OPERATED SCHOOLS**

**Purpose**

- **Resource Projection**
- **Allocation to Regions**

**Features**

- **Units (Number of Students) x Unit Cost (Tuition Rate)**
- **School Based**
- **Sensitive to Geographic, Demographic and Curriculum Factors**
- **Sound Defensible Base for Resource Projection**
- **Aggregated Costing**
- **Consistent with Provincial Methodology for Funding School Boards**
- **Structured According to a Set of Principles which are consistent with Program Objectives**

## PRINCIPLES

- EQUITY
- SENSITIVITY
- EFFICIENCY
- ADMINISTRATIVE VIABILITY
- UNCONDITIONALITY
- AUTONOMY

## METHODOLOGY

Units x Per Pupil Rate + System Allocation - Federal Offsets

- Units: Full Time Equivalents  
Based on Nominal Roll

- Per Pupil Rate

Non Adjusted Base Rate + Incremental Student Allocation x Adjustment Factors

Non -Adjusted Base Rate: Basic Funding Unit - National

Incremental Student Allocation: Native Language  
Low Cost Special Education  
Second Level Services

Adjustment Factors: Geographic 50% of Base  
BBCM Geographic Indices

Small School Average Number of Students  
Five or less/Six to Ten per Grade  
Second Official Language  
English as a Second Language

## METHODOLOGY

- | Units x Per Pupil Rate | System Allocation                           | Federal Offsets  |
|------------------------|---|--|
| •                      | System Allocation:                          | School Administrative Costs<br>One System Allocation per System<br>Does Not Duplicate Band Support Funding<br>Minimum FTE - 10                                 |
| •                      | Federal Offsets:                            | \$ Deduction for Direct Services Available to Federal Schools<br><br>Includes:      Devolution Offset<br>2 <sup>nd</sup> Level Offset<br>Teacher Salary Offset |
| •                      | Specific Program Costs:<br>Formula Excludes | High Cost Special Education<br>Facility Rental BSCM  |

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