

**The Cost of Addressing the Special Education Needs of Mi'kmaw  
Kina'matnewey Students in Nova Scotia**

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## **The Cost of Addressing the Special Education Needs of Mi'kmaw Kina'matnewey Students in Nova Scotia**

### **Executive Summary**

This is a follow-up report to a study we completed for Mi'kmaw Kina'matnewey, completed in February 2001 and titled *Mi'kmaq Students with Special Education Needs in Nova Scotia*. That study documented the large number of M-K students attending school both on and off reserve who were deemed by school personnel to have additional or special education needs, the type of needs encountered, whether the students had been professionally assessed, and whether the students were at risk of school failure, among other information.

Subsequently, we were asked by M-K to develop estimates of the cost that would be encountered to address the special education needs of the M-K students. In this follow-up report,

- we establish a set of principles which should guide the provision of programs and services for Mi'kmaq students with special education needs and by implication the cost of providing such programs and services
- we prepare an estimate of costs for addressing the special learning needs of M-K children by using a census-based funding approach whereby a given dollar amount is specified for each student in the school system. We make the assumption that M-K students should at a minimum have available to them the same per capita funding that is available to Nova Scotia students, but also taking into account the fact that the percentage of M-K students with special education needs is three times higher than it is for Nova Scotia students. This results in an estimated cost close to \$3 million annually
- we also prepare a separate set of estimates for what we think would be the actual cost of addressing the special learning needs of M-K students, using the data collected in our study on the actual learning needs identified and the number of students affected. We also include the cost of implementing the recommendations contained in the *Mi'kmaq Students with Special Education Needs in Nova Scotia* study. The result of this estimation procedure, which is summarized in Appendix C, is that there would be a one-time cost of \$130,000 and an ongoing cost of \$7.14 million, although the ongoing cost would decline significantly over time.

Major costs contributing to the total include the need to undertake professional assessments of the students in the first two years because only 20 per cent of the students deemed by school personnel to have additional learning needs have in fact been professionally assessed.

In keeping with the literature on best practices for addressing special education needs, other significant cost items include the addition of resource teachers and teaching assistants to schools, provision for specialized staff such as speech language pathologists and psychologists, and a substantial investment in reading recovery for the many students who have learning disabilities that show up in areas such as reading comprehension, basic reading skills, and written expression.

Our cost estimates underline the importance of strategies for prevention and early identification/intervention. We also make provision for the expanded use of assistive technologies to aid students with learning difficulties.

Finally, we address the need to enhance the capacity of Mi'kmaw Kina'matnewey to be able to address the learning needs of its students by expanding its staff resources.

# **The Cost of Addressing the Special Education Needs of Mi'kmaw Kina'matnewey Students in Nova Scotia**

## **Introduction**

In the study *Mi'kmaq Students with Special Education Needs in Nova Scotia*, it was established that the percentage of Mi'kmaq students with additional education needs under the jurisdiction of Mi'kmaw Kina'matnewey (M-K) is much higher than for Nova Scotia students in general. It was further established that the funding that M-K has available for addressing these needs is much lower on a per capita basis than is the case for other Nova Scotia students. Furthermore, funding per student in Nova Scotia lags behind almost all other provinces, placing Mi'kmaq students at a double disadvantage.

In this follow-up report, we have been asked by M-K to develop some estimates of the cost of addressing the additional learning needs of M-K students. To this end, we undertake three tasks:

- we establish a set of principles which should guide the provision of programs and services for Mi'kmaq students with special education needs and by implication the cost of providing such programs and services
- we prepare an estimate of costs for addressing the special learning needs of M-K children by using a census-based funding approach whereby a given dollar amount is specified for each student in the school system. We make the assumption that M-K students should at a minimum have available to them the same per capita funding that is available to Nova Scotia students, but also taking into account the fact that the percentage of M-K students with special education needs is three times higher than it is for Nova Scotia students
- we also prepare a separate set of estimates for what we think would be the actual cost of addressing the special learning needs of M-K students, using the data collected in our study on the actual learning needs identified and the number of students affected
- we estimate the cost of implementing the recommendations contained in the *Mi'kmaq Students with Special Education Needs in Nova Scotia* study

## **A Set of Guiding Principles**

Addressing the needs of students with special education needs involves choices among a number of different funding and program models, and varying levels of standards for the

delivery of services. A first step in estimating the cost of addressing the special education needs of M-K students is to make these choices explicit.

The principles that we have chosen are presented below:

1. Mi'kmaq students are entitled to a comparable level of special education services as their provincial counterparts. Lesser standards of service for Mi'kmaq students are unacceptable.
2. Mi'kmaq students must not be disadvantaged as First Nations students because of their province of residence, or when moving among provincial systems. The funding per student in Nova Scotia is the second lowest in Canada. First Nations students in Nova Scotia have a right to be funded at a level comparable to national funding levels.
3. Until M-K develops its own policy framework, the model for the delivery of programs and services for Mi'kmaq students in Nova Scotia will be based on the delivery model outlined in *Nova Scotia Special Education Policy Manual* (1996) and related supplementary documents. This model reflects the philosophy of inclusion.
4. The model for funding programs and services for Mi'kmaq students with special needs may be a hybrid model which combines census-based funding and flat grant funding. Funding in Nova Scotia is based on a census-based model that is not always responsive to the needs of small communities.
5. The *Severity of Special Educational Needs Guide* developed for the study titled *Mi'kmaq Students with Special Needs in Nova Scotia* will be considered as a benchmark for the identification of academic needs, achievement levels and outcomes. This guide is congruent with the policies and practices followed in public schools in Nova Scotia.
6. Curriculum and language support for the Mi'kmaw language and culture will be an integral part of programming.
7. The infrastructure supporting special education programs and services will include fully qualified teachers, professionals and teacher assistants. The competencies required for the various roles will be described in guidelines and procedures.
8. A comprehensive professional development plan will be developed that will include short-term and long-term plans. This plan will include a needs assessment and have outcomes referenced to student achievement. This plan will include classroom, school, and system-based initiatives that support students with special needs. Services to students with special needs must be built upon strong classroom practices that promote academic, physical and social inclusion.

9. To encourage recruitment and retention of qualified staff in band-operated schools, total remuneration levels will not be less than those afforded by other educational authorities in the same province.
10. In addition to educational needs, students with special needs may have physical and/ or social/behavioural/emotional needs that require services from agencies outside of the education system. Interagency cooperation will be sought and encouraged to help address these needs by adopting an approach that views the student in a holistic manner in the context of the family and the community. The uniqueness and individuality of all families will be respected.
11. The importance of early interventions will be acknowledged at all levels. Aboriginal Head Start and early intervention programs for children 0-5 with special needs will provide valuable experiences upon which educational programs can be built.
12. Research that is current and credible will be reviewed and projects will be initiated to adapt and develop approaches that are appropriate to Mi'kmaq children and youth with special needs.
13. Emphasis will be placed on a delivery system of supports and services that will be adequate and appropriate, and delivered in a timely fashion to children and youth with special needs in their schools and home communities in a cost effective manner.

## **Estimating Costs Based on a Census Formula Approach**

In 1998-99, the amount allocated for special education for all Nova Scotia students is based on a figure of \$265.50 for each student in the provincial school system. The comparable figure for M-K students is \$216 per student. However, provincial school boards actually spend quite a bit more than the amount formally allocated to them in the provincial education budget. As noted in the M-K study, the average actual spending per capita is in the order of \$409.

One way to approach the issue of estimating the cost of meeting the special education needs of M-K students is to make the assumption that, at a minimum in order to obtain levels of service comparable to the province's children, the allocation should be at the same level as provided by the province – that is, either the \$265.50 per student that is allocated in the budget or the \$409 that is on average actually spent by the School Boards.

However, the M-K study established that 53 per cent of M-K students were identified by school personnel or special needs specialists to have additional learning needs. This compares to an estimated 17 per cent of Nova Scotia students in the public school system

who, in one report, were said to be "... receiving support services from resource teachers, speech language pathologists, school psychologists, teacher assistants and others...". Thus we make the assumption that the percentage of M-K students with special education needs is three times higher than it is for Nova Scotia students, and therefore the per capita figures noted in the previous paragraph should be tripled.<sup>1</sup>

This leads to the following equations, taking into account that there were 2374 students on the M-K nominal roll in the 1999-2000 academic year:

(1) Current funding available to M-K students is:

$$2374 \text{ students} \times \$216 \text{ per student} = \$512,784$$

(2) Funding at Nova Scotia's designated amount per student:

$$2374 \text{ students} \times (\$265.50 \text{ per student} \times 3) = \$1,890,891$$

(3) Funding at the average actual expenditure per student in Nova Scotia:

$$2374 \text{ students} \times (\$409 \text{ per student} \times 3) = \$2,912,898$$

Thus, the level of funding that M-K should be receiving according to this method of estimation is close to \$3 million if M-K were to receive the same level of funding as school boards in Nova Scotia actually spend, taking into account the higher proportion of student with special education needs among the M-K student population.<sup>2</sup>

## **Estimating Costs Based on Actual Needs**

There are different ways of estimating the costs of addressing special learning needs, as outlined in our report on *Mi'kmaq Students with Special Education Needs in Nova Scotia*. For example, some jurisdictions place emphasis on doing professional assessments of students, determining what particular category of special need the student falls into, and then providing the professional and other services that are required to address the special need. This is known as the categorical approach, one that is also sometimes called a medical model and one that finds favour within the Department of Indian Affairs and

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<sup>1</sup> One might also ask whether the composition of the special needs population in the two jurisdictions is the same. If, for example, a higher percentage of M-K students had severe needs than was the case among Nova Scotia students, then an additional correction factor would need to be applied. While data on the special needs of Nova Scotia students is hard to come by, we do not have any reason to believe that the internal composition of the special needs population in the two jurisdictions is markedly different.

<sup>2</sup> Taking the Nova Scotia spending figure as the norm does not, of course address the fact that the Nova Scotia figure is among the lowest in the country. Nor does it take into account the probability that there is a higher proportion of M-K students who would have left the school system at age 16 or later and hence are not counted in our figures.

Northern Development. Other approaches to determining costs would not place the same emphasis on high-cost assessment, categorization and remediation, but would instead simply determine if the student is meeting expected educational outcomes for his/her age and grade level. If not, it would place the emphasis on developing and implementing a plan that would address the situation. The emphasis in categorical approaches is on improving the education of children by improving assessment, categorization and placement. Non-categorical approaches tend to place the emphasis on improving programming. There is, of course, overlap between the two. In a non-categorical approach, students still need to be assessed to determine at least if they are meeting expected educational outcomes, and in some cases there is no avoiding assessments to determine specifically what kind of condition a student has. And both approaches require remedial action.

In this segment, we approach the costing exercise by relying on our data of the actual kinds of special learning needs faced by M-K students, as specified by school personnel. We then work through what would actually need to be put in place to address these needs. As noted in our study *Mi'kmaq Students with Special Education Needs in Nova Scotia*, almost 80 per cent of the students deemed to have special education needs fall into three categories: learning disabilities such as difficulty with reading, writing and mathematics (46.5%); emotional/behavioural issues such as attention deficit, depression or anxiety (22.7%), and speech and communication disorders (11.0%). The bulk of the costs itemized below are directed at these problems.

Other kinds of special needs include cognitive impairments, physical/health impairments, autism/spectrum disorders and severe multiple disabilities. These kinds of conditions are typically addressed and funded through the health system and these costs are not included below except as noted.

We begin our estimates with the cost of doing professional assessments of the students with special learning needs, followed by staffing and other costs for personnel that would work in the classroom and with individual students. It should be noted that we are proceeding on the assumption of zero-based budgeting – that is, we estimate the total cost involved, not the cost that might be additional to what is already being provided.

### **Assessments by Non-teaching Professionals to Help Identify Strengths and Needs of Students for Programming**

In the M-K study, of the 1068 students who are described as having a disability, disorder, or health impairment, or to be gifted, only about 20 per cent (212 students) have been professionally diagnosed by personnel such as a doctor, a psychologist or speech language pathologist. School personnel have identified the remainder.

The remaining students need to be professionally assessed and a determination made about the professional and other services that are required to meet their special needs.

Our calculation leads to the result that 5 teams of 2 persons each would be required for assessment purposes, and they could do the assessments over a 2-year period.<sup>3</sup>

Estimate

1068 - 212 = 856 students in need of professional assessments at an average cost of \$1,500.00.

856 X \$1,500.00 = \$1,284,000

Resources, Assessment Materials and Computers

5 X \$5,000.00 = \$25,000.00

Recruitment

\$10,000.00

Professional development 10 persons @ \$2200 = \$22,000

Testing equipment 10 persons @ \$1,000 = \$10,000

Secretarial support assuming 5 teams @ 2 persons per team with one half-time secretary per team @ \$15,000 + 11 % f.b. = \$16,650 x 5 teams = \$83,250

This 2-year assessment would deal with the students needing assessments at different grade levels at a given point in time and would deal with the backlog that has accumulated. Over this period of time, an ongoing system of identifying students with special needs and assessing them would also need to be established, and this is discussed below under the heading of prevention and early intervention.

## Resource Teachers

Resource teachers have competencies in the areas of assessment, programming, and collaborative practices that are in addition to the competencies of classroom teachers. They provide support to students with special needs and teachers. In the provincial system one resource teacher is usually provided for 175-200 students, with 17 per cent of students requiring some type of support and/or service because of mild, moderate or severe educational needs.

As we noted above, the M-K study found that 52 per cent of Mi'kmaq students were identified with a mild, moderate or severe educational need. This number is three times higher than in the provincial system. Based on this information, it is recommended that one resource teacher be provided for 58-67 students. In a practical fashion, this would work out to be one resource teacher for every three classrooms in a school.

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<sup>3</sup> We assume each team can do assessments for approximately 85 students each year, calculated at 2 days per student.

Estimate

2374 students/63 = 37 teachers x \$50,000.00 (average teacher salary) =  
\$1,900,000

Fringe benefits @ 15% = 285,000

Resources, Assessment Materials and Computers

37 X \$5,000.00 = \$185,000.00

Professional development 37 persons @ \$2200 = \$81,400

About a quarter of the 2374 M-K students are going to school off-reserve, in provincial schools. Bands pay the educational costs of their children attending off-reserve through tuition agreements signed between the band and the local school board. M-K may wish to establish a pool of funds taken from the resource teacher allocation specified above that would be available to bands upon application. This would permit them to supplement the moneys available for tuition agreements to make possible the appointment of additional resource teachers in the provincial schools.

While the need for resource teachers may decline over time as various interventions take effect, we assume for costing purposes that the need for resource teachers will remain at the budgeted level above for the foreseeable future.

### **Speech Language Pathology and Psychology Staff for Interventions with Students After Assessments**

Our study found that there are 244 M-K students with some kind of speech impairment or communication disorder, as well as another 200 students with other conditions (e.g., cognitive impairments) that will also require speech/language interventions. We estimate that it will require 6 speech language pathologists located in different parts of the province to address this situation, beginning with the most severe cases. Many students will require ongoing attention and there will also be new cases arising each year, so we see an ongoing need for these 6 positions<sup>4</sup>.

Salaries 6 persons @ \$45,000 + f.b. @ 15% = \$310,500

Travel \$750/mos. x 10 mos. x 6 persons = \$45,000

Meals \$200 per month x 10 mos x 6 persons = \$12,000

Telephone charges \$100 per mos. x 10 mos. x 6 persons = \$6,000

Professional development \$2200 x 6 persons = \$13,200

Our study has also identified close to 500 students who have some type of emotional or behavioural challenge. Many of these issues can be addressed in the classroom by

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<sup>4</sup> For both speech language pathologists and psychologists, we assume that an average case load per person is in the order of 20-25 students. Speech language interventions take about 16 weekly sessions per student, on average, while the figure for psychological interventions is 6 weekly sessions.

teachers and their assistants, with the support of resource teachers and families, but there is a need for added professional psychologists. Having psychologists available will begin to remedy the lack of mental health services available in the school system and help to prevent students being suspended because school staff have no alternative available for dealing with students with emotional/behavioural problems. We have estimated that at least 4 psychologists are required at a cost similar to the speech language pathologists and that this will be an ongoing requirement.

Salaries 4 persons @ \$45,000 + f.b. @ 15% = \$207,000  
Travel \$750/mos. x 10 mos. x 4 persons = \$34,000  
Meals \$200 per month x 10 mos. x 4 persons = \$8,000  
Telephone charges \$100 per mos. x 10 mos. x 4 persons = \$4,000  
Professional development \$2200 x 4 persons = \$8,800

### **Occupational therapist**

This service is normally provided by district health boards but there are huge waiting lists, which makes the available services very difficult to access in a timely fashion. We recommend the hiring of a full-time occupational therapist who would be available to work with the M-K students. The occupational therapist will also consult with staff in developing appropriate techniques for feeding, lifting and providing personal care for students with physical needs.

1 occupational therapist @ \$40,000 + 15% f.b. = \$46,000  
Professional development @ \$2200 = \$2200  
Travel \$750 per month x 10 months = \$7500  
Meals \$200 per month x 10 months = \$2000  
Telephone charges \$100 per month x 10 months = \$1000

### **An Expanded Program of Professional Development for Classroom Teachers Resource Teachers and Administrators on Issues Related to Special Education**

The estimated cost of implementing this recommendation is based on a two-day workshop for classroom teachers, resource teachers and school administrators, held at a central location within Nova Scotia. We divided the number of M-K students by 15 to obtain the number of teachers and administrators ( $2375/15 = 158$ ), and then added 37 resource teachers to obtain the total number of school personnel. We have also assumed that this workshop would be offered on two occasions and that school personnel would have a choice as to which of the two workshops they would attend.

The costs would be as follows:

- (a) Replacement costs for teachers (2days @ \$250/day X 160 teachers) = \$80,000
- (b) Honouraria for presenters and resource personnel 10 persons @ \$500 x 2 occasions = \$10,000
- (c) Travel for presenters and resource personnel: 10 persons @ \$150 x 2 occasions = \$3,000
- (d) Accommodation and subsistence for presenters and resource personnel: 10 persons @ \$200 x 2 occasions = \$4,000
- (e) Travel for classroom teachers, administrators and resource teachers: 195 persons @ \$150 = \$29,250
- (f) Accommodation and subsistence for classroom teachers, administrators and resource teachers: 195 persons @ \$200 = \$39,000
- (g) Books and other resource materials: 195 persons @ \$100 = \$19,500

### **Teaching Assistants**

In the provincial system, the ratio of students to teaching assistants is 104 students for each assistant. On the assumption that the number of M-K students with special education needs is three times higher than it is for the provincial system, we have calculated a ratio of 35 students for each teaching assistant in the Mi'kmaq system. There are 1771 M-K children attending school on reserve, therefore a need for  $(1771/35 = 51)$  teaching assistants.

51 assistants @ \$14 per hour x 6 hours per day x 200 teaching days x 11% f.b. = \$951,048

professional development 1 day at a central location

51 persons @ \$150 for travel, \$100 for meals/accommodation, \$100 for books and materials = \$17,850  
 resource personnel: \$3500

### **Reading Recovery Work<sup>5</sup>**

We propose that one Mi'kmaq teacher undertake the year-long reading recovery training available in Toronto or Winnipeg, and return to Nova Scotia to train teachers in the M-K system for this work. The cost for the initial training of the reading recovery teacher leader would be as follows:

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<sup>5</sup> We have chosen to estimate the costs of the reading recovery program, which is the most widely-used intervention with Grade 1 students who are experiencing reading difficulty. There are other approaches, however, such as Success for All (for reading and writing) and Mathwings (for mathematics instruction). These programs are similar from a cost point of view in that all require a fee to be paid to the organization that has the copyright to these approaches as well as costs for personnel to provide intensive instruction to small groups of students.

Estimate

Tuition @ \$13,000

Travel (3 round trips to Nova Scotia @ \$600) = \$1800<sup>6</sup>

Salary during absence: \$40,000 + 15% f.b. = \$46,000

Books: \$2,000

Upon returning to Nova Scotia, the reading recovery teacher leader requires ongoing salary support. He/she will be engaged in providing training for other teachers in the methods of reading recovery work, as well as ongoing staff development with trained teachers and consulting on children who are experiencing exceptional difficulty.

Ongoing Salary Reading Recovery Teacher Leader \$50,000 + 15% = \$57,500

Professional development @ \$2200 = 2200

Travel \$750 per month x 10 months = \$7500

Meals \$200 per month x 10 months = \$2000

Telephone charges \$100 per month x 10 months = \$1000

A reading recovery room that can be used for training classes needs to be prepared and equipped. At a minimum, it requires a sound system and one-way glass so that teachers in training can observe teaching methods with a class of children.

Estimated cost of reading recovery room: \$6,000

We estimate that 74 Grade 1 students need reading recovery work each year (185 students entering of which 40% have additional learning needs) . One reading recovery teacher working half-time and teaching normal classroom for the balance of the time can work with 8 reading recovery students. Therefore a minimum of 10 teachers is required on a half-time basis. We have estimated costs for 14 teachers because of the need to take the geographic distribution of the students into account. Small member bands might use these funds to purchase reading recovery services from a local board.

Estimate

14 teachers @ 50% x \$40,000 x 15% f.b. = \$322,000

Professional development @ \$2200 x 14 = \$30,800

The Reading Recovery Teacher Leader would be responsible for training other teachers the methods of reading recovery work. We assume that there are already some teachers in the system who have these skills, and budget for training 10 out of 14 teachers in Year Two, and 8 teachers in Year Three. The training costs are estimated to include the cost of

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<sup>6</sup> Part of the rationale for these trips is that the Mi'kmaq teacher would meet with personnel from M-K schools, make presentations about reading recovery and begin planning for training other teachers in the second year of the initiative.

travel to the teaching site each week for 40 weeks, and costs for start-up materials such as books, white boards, and so on.

Year Two: Training costs for 10 teachers @ \$4,000 = \$40,000

Year Three: Training costs for 8 teachers @ \$4,000 = \$32,000

The Reading Recovery Program requires that a site licence be paid annually. We care assuming that the M-K Board would qualify as one site.

Reading Recovery Site Licence Fee: \$2,000 per year

### **Resources to Deal With Sensory Impairments**

Nova Scotia children with serious hearing and sight impairments are cared for by the Atlantic Provinces Special Education Authority (APSEA), whose services also extend to Mi'kmaq children. At present, there are 6 First Nation children benefiting from APSEA services, with the Province of Nova Scotia picking up the costs. However, this may not continue in the future, so it is sensible to develop a cost estimate for services to children with sensory impairments. Also, the number of Mi'kmaq students requiring APSEA services may increase as the assessments specified above are completed.

Accordingly, we have budgeted for 10 students per year. Information provided by APSEA suggests that the average annual cost for each child in its care, including the cost of assistive technology, was in the order of \$10,000.

APSEA related costs for children with severe sensory impairments:  
10 children @ \$10,000 per child = \$100,000

### **Assistive Technology**

Assistive technology is a term used to describe a wide range of high and low tech devices and services that can be used by individuals with diverse abilities to increase, maintain or improve functional capacities. Low tech devices include items such as pencil grips, paper holders and splints. High tech devices include voice synthesizers, Braille readers and computers. Assistive technology services provide direct assistance to individuals with a disability in the acquisition or use of any assistive technology device.

We recommend the establishment of an *Assistive Technology Fund* to which schools located both on and off-reserve can apply so that they can put in place the assistive technologies that M-K students need. Provincial schools applying for funding would be required to demonstrate that the assistive technology requested is not covered under a tuition agreement and is an enhancement to existing technology and services.

The following categories of assistive technology would be covered by the fund: aids for daily living; augmentative or alternative communication and computer access, educational/vocational/cognitive supports (mainly computers and related software to assist students in reading and writing); environmental control systems and home/school/worksites modification; wheelchair and other mobility aids; vehicle modifications; and professional development for teachers, parents, caregivers and students. This is in addition to other kinds of assistive technologies already included in our costing exercise.

We recommend that \$260,000 be set aside for this fund each year for at least four years. This would permit some catch-up to occur since the budget does not assume that all needs will be met in the first year, and some additional needs to be met as the assessment process specified above runs its course. The amount in the fund should be reviewed each year. Details on the cost estimate for assistive technology are found in Appendix B.

### **Enhancing M-K Capacity to Coordinate and Monitor Work on Special Needs**

Mi'kmaw Kina'matnewey will need to strengthen its staff resources so that it can adequately coordinate and monitor the activities that are proposed as the organization and its member bands address the special education needs of the students.

We are proposing that M-K hire a full-time coordinator of student services who will coordinate professional staff and teacher assistants involved special education. The coordinator will also establish working links with agencies in the health, social services, justice and recreation fields that provide support services to students with special needs. He/she will be responsible for overseeing the development of policy, procedures, and guidelines for appropriate programming and services.

Estimate

Coordinator of Student Services, (\$65,000 salary + 6500 benefits) = \$71,500

We are also proposing a research assistant who will track students on measures such as attendance, the number of students above or below average, change over time, and other outcome measures. Much of the required information is available through school records (cumulative record cards).

Research assistant @\$30,000 + 11% f.b. = \$33,300

### **Estimating the Cost of the Remaining Recommendations in the M-K Study**

In the M-K Special Needs Study, a number of recommendations were put forward that represent one-time costs for discrete activities, or that can be funded from sources other than the special needs budget. These estimates are given below.

## **Developing a Policy Framework**

To establish a “comprehensive and culturally appropriate special education policy”, we assume that M-K would engage a person who would take existing educational policy frameworks, such as those developed by Nova Scotia and by Aboriginal organizations, and develop a draft suitable for M-K. The draft would be prepared in consultation with M-K’s Special Education Sub-Committee, and would be discussed in each of M-K’s nine member communities. The final draft would be submitted to the M-K Board for approval.

The estimated cost of this recommendation would be as follows:

- (a) Cost of consultant: 15 days @ \$500/day = \$7500
- (b) Travel and subsistence: \$4000
- (c) Note taker for community meetings: \$1800
- (d) Printing and distribution: \$500

## **Undertaking a Study of Funding Requirements and Funding Formula**

This is the study reported in this document. The estimated cost is \$8000.

## **Developing Strategies for Prevention and Early Intervention**

Most of the recommendations discussed in this paper deal with the resources and services that are required by Mi’kmaq students currently enrolled in the education system who have been identified as having additional learning needs. An effective strategy, however, should also find ways to prevent the development of special learning needs in the first place, or at least to identify problems at an early age so that interventions can prevent them from becoming more serious. For a variety of reasons, however, it is easier to take remedial than preventive action and the measures that are required for an effective preventive program are not as evident.

In Appendix A, we discuss some ideas about preventive and early identification measures focused on four areas: reducing poverty, inequality and dependence; developing a program of family intervention and support; developing a program of school-based changes; and designing an effective program of early identification and intervention. The first of these measures (reducing poverty) is largely being implemented by the Aboriginal political leadership and by economic development officers and related organizations, and is not seen as a cost item for M-K. The other three measures are briefly discussed below, and involve costs designed to support M-K participation in strategy development along with other Mi’kmaq organizations.

### ***Family Intervention and Support***

While many factors contribute to the additional learning needs of some Mi'kmaq students, the M-K study found that sometimes family instability and lack of family support are factors that contribute to the risk of school failure. It is important that families have advice and support in matters such as appropriate nutrition for early childhood intellectual development, activities that can help or hinder the child's development, the kinds of physical and social home environments that children need to succeed in the educational system, and so on.

In addition, if parents are to work effectively with those children who are struggling in the school system, they need to be prepared for this role. This would include the need for resource personnel to make home visits to educate parents about the need for early identification and intervention, how to become the case manager of their child's education, where to go to access resources, and so on.

Other Mi'kmaq social agencies such as those who work in the fields of health, addiction and family and children's services also perceive the need for an effective program of family support. Thus, it would be advisable to design an integrated approach with the cost to be shared among several agencies.

Cost estimate to support M-K participation in the development of a family intervention and support strategy: \$30,000

### ***School-based Changes***

In our study, teachers did not often see the school itself as contributing to Mi'kmaq students having special learning needs, but if the problems include lack of attendance, lack of motivation, and behavioural issues it stands to reason that the schools themselves are not always providing a welcoming and stimulating environments for many Mi'kmaq children. They can and should be part of a change strategy to address issues such as cultural difference between the students and the school, curricula that do not sufficiently motivate students, interpersonal tensions in the school environment, or lack of connection between the school and the community. In addition to preventive measures, there is a need to have the best information possible on strategies for addressing the special learning needs that have already been identified.

One of the recommendations in our special needs study is to carry out a review of past and current best practices. This study is to provide guidance on "the kinds of interventions that would have a good chance of success in preventing or addressing the special learning needs of Mi'kmaq children". This involves contracting with an established scholar in the area of special needs education, a person who is already familiar with much of the literature in this field as it pertains to both Aboriginal and non-Aboriginal students.

The estimated cost of this recommendation is as follows:

- (a) Stipend for Literature Review \$6,000
- (b) Library assistant for collecting documents: 2 months @ \$2700/month = \$5400
- (c) Purchase of materials and copying: \$500

***Emphasizing Early Identification and Early Intervention in the Special Education Policy Framework***

Identifying problems at an early stage and intervening before they get worse can be seen as another form of preventive action. To implement the recommendation that M-K emphasize early identification and intervention in its special education policy framework, we make provision in this costing exercise for assessment staff identifying children with additional learning needs at Grade 1, on an ongoing basis. This might involve assessing some 100 - 115 students per year, a figure that is within the reach of a two-person team. The ongoing cost for assessments is estimated as follows:

Estimate

100-115 students in need of professional assessments at an average cost of \$1,500  
 $150 \times \$1,500 = \$225,000$

Professional development 2 persons @ \$2200 = \$4,400

Secretarial support assuming 1 team @ 2 persons per team with one half-time secretary per team @ \$15,000 + 11 % f.b. = \$16,650

The Province of Nova Scotia is currently implementing an Early Identification and Intervention System that would involve a medical screening of all children at 18 months as well as related program development such as home visits to new mothers and new babies under the jurisdiction of the provincial health boards. The Department of Community Services has initiated and enhanced programs and services for pre-school children such as providing subsidized spaces for children with special needs in child care settings and arranging for Early Intervention Programs for pre-school children with special needs. The latter service is available to all children in the provincial system and is delivered in the home.

The Mi'kmaq community will need to decide whether it wishes to participate in the provincial program or develop a Mi'kmaq approach to the issue, and this will involve consultations and strategy development among a number of Mi'kmaq agencies and government departments. In order to facilitate M-K participation in this strategy development exercise, some funds will need to be set aside.

Estimate

Costs for participating in the development of an early identification and intervention strategy for Mi'kmaq children: \$30,000.

### **Strengthening Teacher Education in the Area of Special Education, Including Preparation for Work in Mi'kmaq Communities**

Teacher education programs in Nova Scotia are required to make available a full credit course in special education. It is expected that issues related to diversity will be included in all appropriate courses. In addition, Master's Degrees with an emphasis on special education are available for resource teachers at Acadia, Mount Saint Vincent and St. Francis Xavier universities.

A useful addition to the curriculum of teacher education programs would be a course that taught students about teaching in Aboriginal communities, including content on cultural difference and on special education.

The cost of curriculum development for such a course is estimated to be \$5,500.

### **Pre-Service Training for Teaching Assistants**

A program of training for teaching assistants in the area of special education is presently available at the community college in Truro and at Eskasoni. This training falls under the heading of pre-service training, and it is assumed that normal funding for post-secondary or vocational training will be accessed.

### **Increasing the Number of Mi'kmaq Graduates From Educational Programs Relevant to Special Education**

It is evident that there are hardly any Mi'kmaq personnel available who could fill the need for the resource and assessment personnel identified above, nor provide the specialized services that the Mi'kmaq students require in areas such as occupational therapy, audiology or speech language pathology.

We suggest that a small research study is required to establish more precisely the kinds of occupations that need to be filled and the present availability of Mi'kmaq personnel. The actual costs of educating Mi'kmaq students at the post-secondary level can be met by existing post-secondary education funding, although M-K communities may need some supplementary resources because their existing post-secondary budgets are stretched to the limit. In addition, some potential students may have exhausted their entitlement to post-secondary education funding. It is also possible that school boards can identify presently-employed staff with the aptitude and interest to be educated in these fields.

The budget for the implementation of this recommendation should include the following elements:

- (a) Research study to determine need and availability: \$5,000
- (b) Funds to promote recruitment and retention of Mi'kmaq students, and to adapt curricula: \$60,000
- (c) Educational support for 5 students per year @\$20,000 = \$100,000

### **Developing a Protocol with the Nova Scotia Government for the Sharing of Information and for Consultation in the Area of Special Education**

We do not regard this recommendation as imposing additional costs. The drafting and negotiation of a protocol would fall within the terms of reference of existing staff and the Board of M-K. The proposed Coordinator of Student Services, mentioned in the implementation of Recommendation 6.1 above, would also contribute to this process.

### **Overseeing the Implementation of the Recommendations**

We propose that the M-K Sub-Committee on Special Education oversee the implementation of the recommendations.

Cost estimate: 4 meetings per year @ \$2000 per meeting = \$8,000

### **Conclusion**

Appendix C provides summary information about the various interventions for which costs have been estimated above. One can conclude that the cost of meeting special education needs through a per capita allocation for each student in the school system (\$2.91 million) is quite a bit less than the projected cost if all of the required resources and supports are estimated individually and totaled (\$7.27 million), although this latter figure would decrease substantially over time beginning in the second or third year of a concerted program.

## **Appendix A: A Note on Early Identification and Prevention Strategies**

Those charged with the responsibility of designing social policy and programs have to make choices, either explicitly or implicitly, on what kinds of interventions to make. In particular, they need to decide how much emphasis they would place on remedial action with persons who have already been identified with particular needs, and how much emphasis they would place on preventive action to prevent a problem from emerging and on early identification or to prevent an existing problem from getting worse.

On ethical and other grounds, no one would be inclined to write off the present generation of Mi'kmaq students with special learning needs, and deny them the specialized resources they need to overcome their learning difficulty or to cope with it in a more satisfactory manner. Therefore, much of the costing exercise is preoccupied with putting in place the resources and services they need. This is the easier road, for the "problem" has been identified, the "targets" are clear, and a good deal of experience has been accumulated over the years about how to do this remedial work and what kinds of interventions will get results.

It is in any event not possible to draw a sharp line between remedial and preventive interventions, and at least some of the resources we have identified in the main body of this paper can be directed at least in part to preventive and early intervention purposes. However, efforts at prevention should not be regarded as a marginal activity. It should be a central part of an effective strategy to deal with special learning needs, directed to preventing their emergence and cost effective in the long run because it would reduce the major costs associated with remedial action.

Just what to do on the preventive front is not that clear, however, and involves as well the coordinated action of a number of Mi'kmaq agencies. That funds that are budgeted are therefore, at this early stage, more directed at strategy development than they are to program implementation. We have divided our discussion into four sections:

- Reducing poverty, inequality and dependence
- Family intervention and support
- School-based preventive interventions
- Early intervention

### **Reducing poverty, inequality and dependence**

We know that the high incidence of special learning needs among the Mi'kmaq students is not unusual among populations victimized by poverty, inequality, high unemployment

or racism, whether that is played out in urban inner city neighbourhoods or in areas of rural isolation. Thus, at the most general level, an effective prevention strategy involves a profound transformation in the circumstances of the people affected – a process of social and economic development that reverses decades, even centuries, of dependence and despair.

In the Aboriginal context, it involves self-determination, the recognition of Aboriginal and treaty rights, the implementation of effective community and nation building strategies, and the advances in economic development. These are currently being pursued by the Aboriginal leadership at the community, tribal council and nation levels. Under its direction, staff such as the economic development officers are outlining and implementing economic development strategies, social development officers are working on reforms to the welfare system with a view to reducing dependence, and so on. In the education field, the formation of M-K is itself an important step in self-determination.

### **Family Intervention and Support**

We noted in our study that the special learning needs faced by Mi'kmaq students are not, for the most part, associated with physical disabilities or cognitive impairment. We noted that the largest number of cases had to do with learning needs in such areas as reading comprehension, basic reading skills, written expression and mathematical skills. Emotional/behavioural problems were also frequently cited, for example conduct disorders, attention deficit disorder, anxiety or depression.

In another question, we asked the teachers filling in our forms to identify the students thought to be at risk of school failure and to elaborate on the reasons for this. Poor attendance was thought to be a factor in 260 out of 602 cases, followed by lack of motivation/discipline/work ethic (180 cases), behaviour problems (e.g., poor anger management, defiant attitude, abuse of alcohol and drugs, 174 cases), unstable or disorganized family situations (169 cases), lack of family support (e.g., parental neglect, high demands, lack of supervision, 115 cases). Other factors included academic deficits, poor student health, family lifestyle and lack of school supports.

While the pattern of causation behind these factors is complex, it does suggest that interventions at the level of the family/community and by the school could have a beneficial preventive effect.

With respect to the family specifically, our research results and knowledge of the literature suggest that parents need advice and support in areas such as the following:

- Nutrition. What kinds of foods can be beneficial or damaging to the child's intellectual development? The literature suggests the need to reduce items such as refined sugars and white flours in the diet, foods that are linked to problems with insulin production and metabolizing sugar, leading to fatigue, lack of energy, hyperactivity, and possibly to limited brain development.

- Time allocation. While the literature is not well developed on this point, there is an argument for reducing the time children spend watching television and playing video computer games. This is thought to be especially important in the early years of life when the brain is very plastic and is subject to disruption with respect to the development of visual processing capacity, planning capacity and so on.
- Behavioural and environmental conditions. Here the emphasis should be on working with students to motivate attendance at school, to limit late night activity, to provide an environment that is low in stress, to provide a quiet space for studying, and to provide a stimulating home environment (e.g., books for reading)
- Family and parental stability. Measures to promote family stability will contribute to an environment where Mi'kmaq children can succeed in school. This would include measures to reduce parental abuse of drugs and alcohol, and steps to strengthen Mi'kmaq families.
- Increasing parental involvement in the schools.

These are some examples of elements that should be part of a program of family intervention and support. The issue is not only what to do, however, but also how to do it in such a way that the families who need the support are reached by the available services.

As the above list implies, the kinds of issues that need to be addressed at the family level are broad-ranging in nature, and go well beyond the responsibilities of educational authorities. Hence, we have recommended that M-K collaborate with other Mi'kmaq agencies, such as Mi'kmaq Family and Children's Services, Native Alcohol and Drug Abuse Counselling Association, and health and social staff, in developing an appropriate and effective family intervention and support program.

### **School-based Preventive Interventions**

When we asked about the reasons students were at risk of school failure, the teachers and other staff who filled in the forms seldom attributed any responsibility to the schools themselves. Rather, the source of the problems encountered by the students were typically lodged with the students themselves, or with their home and community environment – perceived problems that the students brought into the school and with which the latter then had to cope.

Yet, if frequent issues had to do with non-attendance, or lack of motivation on the part of the students, or behavioural issues, it seems reasonable to assume that the school itself bears some responsibility and that school-based changes should also be considered as part of a preventive strategy. The areas of change that might be considered include the following:

- Cultural difference. In many schools, there may still be too large a gap between the culture of the Mi'kmaq families and communities and the prevailing culture of the schools which are typically reflective of the mainstream, dominant culture
- Curricula. It may be that the curricula taught by the schools are not sufficiently motivating to the Mi'kmaq students
- Interpersonal tensions. These may arise between students based on cleavages among families on reserve, or racial hostilities in provincial schools. Tensions may also arise between Mi'kmaq students and school staff
- Lack of resources. The schools may not have the resources they need to provide a positive, supportive educational environment especially for those students who are struggling – for example, those who have fallen behind in reading, or those with behavioural problems
- Lack of a positive relationship between the school and the community

The recommendations that are costed out in this paper would, if implemented, deal with the lack of school resources for assisting students with special needs. However, the schools also need to take action on a wider front so that their role in the dynamic that puts large numbers of Mi'kmaq students at risk of school failure and premature withdrawal from the education system is addressed. The study of “best practices” that we have recommended should explicitly identify what the schools can do both to prevent and to remediate special learning needs on the part of Mi'kmaq students.

### **Early Intervention at School**

Identifying problems at an early stage and intervening effectively before they get worse can be seen as another form of preventive action. In the main body of this paper, we deal with a recommendation that a policy framework for special education include an emphasis on early identification and intervention. We also suggest that the assessment staff we have recommended be put in place could be asked to do assessments each year of the students who are in Grade 1.

However, we have also noted that the Province of Nova Scotia is undertaking a more ambitious program of early identification and intervention, beginning at 18 months. At this age, all children in the province (except Mi'kmaq children on reserve) are to receive a medical screening and appropriate follow-up interventions by newly-hired professional

staff. While the program is beginning with a focus on children with autism/spectrum disorders, it is to expand to all children with special needs in subsequent years<sup>7</sup>.

In addition, the Provincial Government has announced a strategy for early childhood development that would see every family with a new baby receive a home visit by a public health nurse. Those needing additional support (an estimated 6 per cent of families with new babies) will have the opportunity for continued home visits up to age 3 by either a public health nurse or a specially trained lay home visitor from the community.

The new program also invests in improving the quality of child care and access to it, and seeks to develop a coordinated system of early childhood development in the province.

HRDC is contributing substantially to this initiative, and HRDC funds are also being made available to First Nations through programs such as Head Start and in new programs yet to be announced. As with the family intervention and support strategy discussed above, M-K needs to join with other Mi'kmaq agencies (such as METS and Mi'kmaq Family and Children's Services) in designing the shape of an early intervention and support strategy for Mi'kmaq children. We have budgeted a modest amount for this participation in strategy development in the main part of this proposal.

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<sup>7</sup> The budget for an early Intervention Program is in the order of \$110,000 to provide family-centered services in the home for approximately 14 pre-school children. Costs will vary greatly according to the distances that resource personnel are required to travel.

## Appendix B: Assistive Technology

### Preamble

Assistive technology is a term used to describe a wide range of high and low tech devices and services that can be used by individuals with diverse abilities to increase, maintain or improve functional capacities. Low tech devices include items such as pencil grips, paper holders and splints. High tech devices include voice synthesizers, Braille readers and computers. Assistive technology services provide direct assistance to individuals with a disability in the acquisition or use of any assistive technology device.

The Halifax Regional School Board lists assistive technology under the following headings:

- **Aids for Daily Living:** Self-help aids for use in activities such as eating, toileting and dressing.
- **Augmentative or Alternative Communication:** Electronic or non-electronic techniques and strategies for oral and/or written communication.
- **Computer Access:** Modifications to standard equipment or alternate equipment (headsticks, keyboards, switches, scanners, Braille, etc.) which enables persons with disabilities to use a computer.
- **Educational/Vocational/Cognitive:** Specialized software for reading, writing, spelling, etc. Strategies and devices for organization, behaviour and memory assistance. Adapted instructional manipulatives.
- **Environmental Control Systems:** Primarily electronic devices or systems that enable someone with limited mobility to control appliances, electronic aids and security systems in various surroundings.
- **Home/School/Worksite Modification:** Structural adaptations (ramps, lifts, bathroom changes) that remove or reduce physical barriers for an individual with a disability.
- **Seating and Positioning:** Accommodations to a wheel chair or seating system to provide greater body stability, trunk/head support, upright posture and reduction of pressure on skin.
- **Aids for Vision Impairment:** Aids for specific populations including magnifiers, Braille or speech output devices, large print screens, closed circuit television for magnifying documents, etc.).
- **Aids for Hearing Impairment:** Aids for specific populations including assistive listening devices (infrared, FM loop systems), hearing aids, visual and tactile alerting systems, etc.
- **Prosthetics and Orthotics:** Replacement, substitution or augmentation of missing or malfunctioning body parts (artificial limbs, splints, braces, etc.).
- **Wheelchair/Mobility Aids:** Manual and electronic wheelchairs, mobile bases for custom chairs, walkers, three-wheel scooters and other utility vehicles for increasing personal mobility.
- **Vehicle Modifications:** Adaptive driving aids, hand controls, wheelchair and other lifts, modified vans, or other vehicles used for personal transportation.
- **Service Animals:** Animals assisting individuals with hearing, vision, or physical disabilities.

In addition to the items listed above the following support services are needed:

- Professional development
- Family/Caregiver/Teacher Assistant training

- Collaborative assessment of assistive technology needs to enhance student's Individual Program Plan
- Repair and cleaning of equipment

Schools are not responsible for assistive technology devices covered under medical or other service plans, or for home use. It is the practice of schools to collaborate with families and outside agencies in identifying the need for and the use of assistive technology.

In Nova Scotia a framework for the acquisition, distribution, and provision of a full range of assistive technology devices and services is not available at this time. The Report of the Special Education Implementation Review Committee released in September 2001, recommends that a person be hired to develop such a framework for the P-12 provincial school system.

In the Mi'kmaq context, the person in the proposed position of Coordinator of Student Services for M-K would be responsible for developing a framework for the acquisition, distribution and provision of a full range of assistive technology services. This framework would include guidelines, procedures and forms. The decision to rent and/or purchase equipment and services through agencies such as APSEA, and management and monitoring of assistive technology funds would be the responsibility of the Coordinator of Student Services working under the direction of the M-K Executive Director and Board.

We propose that an *Assistive Technology Fund* be established, and that all the estimated costs listed below for the individual categories be included within it. Individual applications from schools would be required to access these funds following established guidelines. These funds would not be divided equally among individual schools, but would be based on the individual needs of students. The Assistive Technology Fund would be available to students with low-cost and high-cost needs.

It is recommended that the amount recommended below for the Assistive Technology Fund be maintained at the recommended level each year for at least four years. This would give time for "catch-up" since not all of the needs can be met in the first year, as well as for the results of new assessments to work their way into the demand for assistive technologies. However, the amount in the fund should be reviewed and reconsidered for changes yearly.

This fund would be available to schools located both on and off reserve. However, provincial schools applying for funding would be required to demonstrate that the assistive technology requested is not covered under a tuition agreement and is an enhancement to existing technology and services.

### **Cost Estimates for Assistive Technology by Category**

- **Aids for Daily Living**

Self-help aids for use in activities such as eating, toileting, and dressing in school should be provided for students who may require them.

It is recommended that a fund of \$1,000 be established for aids for daily living.

- **Augmentative or Alternative Communication & Computer Access**

Our data indicates that there are 20-30 Mi'kmaq students who are deemed to be medically fragile or who have health impairments such as cerebral palsy or spina bifida<sup>8</sup>. These students may need augmentative or alternate communication and/or computer access devices. The type and cost of these items can only be determined through individual assessments.

It is recommended that a fund of \$50,000 be established for augmentative or alternate communication devices and computer access devices.

**Educational/Vocational/Cognitive**

In our study some 500 students were identified with learning disabilities that impacted on performance in areas such as reading comprehension, basic reading skills, written expression, and mathematical calculation. Many of these students would benefit from computers with specialized software, printers and adapted instructional manipulatives. Accordingly, we have made provision for schools attended by Mi'kmaq students to have one or more sites where these enhanced technologies are available. Some schools, especially those located off-reserve, will already have these facilities, and others with only a small number of Mi'kmaq students won't need them, so there is room under this provision for several sites to be established in schools with large numbers of M-K students.

Computers and printers:

$$\$1,299 + \$129 = \$1,428 \times 56 = \$79,968$$

Mobile tables adjusted for height of students

$$\$99.66 \times 56 = \$5,581$$

Software and instructional manipulatives:

$$\$1,000 \text{ for each of approximately 20 site licenses} = \underline{\$20,000}$$

Total: \$105, 549

We came to an estimate of 20 sites for software and instructional manipulatives based on one site for each of the 13 Mi'kmaq communities plus a second one for Eskasoni. This allows for the possibility that 6 provincial school boards can apply for enhancements. The site licences will cover all classrooms in schools belonging to a particular community or school board.

It is recommended that a fund of \$105,549 be established for computers, tables, printers, software and adapted instructional manipulatives.

• **Environmental Control Systems & Home/School/Worksite Modification**

Many schools include modifications in capital construction. However, situations occur when additional modifications are necessary to areas such as bathrooms to accommodate students with special needs. For example, it may be necessary to install remote door openers for students in wheelchairs. If a high school student has a work placement outside of the school, modifications may need to be made to the worksite.

It is recommended that a fund of \$10,000 be established for school/worksite modifications.

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<sup>8</sup> The exact number is uncertain because not all students have been professionally assessed.

- **Seating and Positioning**

Seating and positioning services are provided by an occupational therapist who also trains caregivers in proper lifting techniques. Costs for equipment would fall under wheelchair and mobility aids. Costs for an occupational therapist were already addressed in a previous recommendation in this costing exercise.

- **Wheelchair/Mobility Aids**

Wheelchairs and mobility aids are covered under medical plans or are purchased through services and community organizations. However, schools should provide for the mobility of students in school, if it is impractical to transport mobility aids to school. Rentals are encouraged.

It is recommended that a fund of \$10,000 be established for wheelchair/mobility aids.

- **Vehicle Modifications**

In our study a number of students, estimated at between 20 and 30, were identified as potentially requiring transport to school in buses adapted to accommodate wheelchairs.

An inset for a wheelchair lift on a bus costs approximately \$10,000. It is recommended that a fund of \$60,000 be established for vehicle modifications. Some communities already have satisfactory equipment in operation, but this fund would give 6 communities the opportunity to apply to upgrade buses as needed. If the demand were greater, the size of the fund could be revisited.

This amount would need to be continually kept in this fund as new lifts may need to be purchased as buses are replaced and as changing safety regulations render existing technologies outdated.

- **Aids for Vision Impairment and Hearing Impairment**

The cost of these items are covered in a previous recommendation in this costing exercise (APSEA).

- **Prosthetics, Orthotics and Service Animals**

The cost of these items are covered by Medical and Other Agencies

- **Professional Development for Teachers and Training for Families, Caregivers and Teaching Assistants**

Teachers and teacher assistants who work with students requiring assistive technology require specific training. This training will take place in the home school, and involves some students as well as teachers and teaching assistants. The in-services would be in different communities on different days and would involve the whole school. Substitute costs would not be a factor as schools would be closed. Teachers from provincial schools could be invited to attend the sessions on reserve.

|   |                 |
|---|-----------------|
| Refreshments:                                   | \$ 2,400        |
| Resource materials for teachers and assistants: | \$ <u>3,200</u> |
| Total:  | \$ 5,600        |

Secondly, parent information sessions would be provided in each community during an evening by board personnel.

|                     |              |
|---------------------|--------------|
| Refreshments:       | \$350        |
| Resource materials: | <u>\$500</u> |
|                     | \$800        |

Finally, specific training for students requiring augmentative or alternative communication is required, along with the student's teacher, family, caregivers and teacher assistant. Since each student's needs are unique, training in most cases must be done individually.

|                     |   |                   |
|---------------------|---|-------------------|
| Substitutes:        | \$250 X 40 classroom and resource teachers    | = \$10,000        |
| Refreshments:       | \$ 12 X 100 teachers, students, parents, etc. | = \$ 1,200        |
| Resource materials: | \$100 X 50 (one set each for home & school    | = \$ <u>5,000</u> |
|                     |   | \$16,200          |

Resource people for both in-services would be employed by board or medical community.

- **Assessments**

Covered by medical agencies and in previous recommendations.

- **Repair and Cleaning**

It is recommended that this be included where possible in regular school equipment funds. Where this is not possible, application can be made as appropriate to the Assistive Technology Fund.

## Appendix C: Summary Table of Cost Estimates Based on Actual Needs

| Item   | Responsibility | One-time Cost | Ongoing Cost                   |
|--|----------------|---------------|--------------------------------|
| 1. Assessment of Students with additional learning needs       |                | 20,000        | 1,414, 250 for each of 2 years |
| 2. Resource teachers   |                |               | 2,451, 400                     |
| 3a. Speech language pathologists                               |                |               | 386,700                        |
| 3b. Psychology staff   |                |               | 261,800                        |
| 4. Occupational therapist                                      |                |               | 58,700                         |
| 5. Professional development                                    |                |               | 184,500                        |
| 6. Teaching assistants   |                |               | 972,398                        |
| 7. Reading Recovery  |                | 6,000         | 527,800                        |
| 8. APSEA services for children with severe sensory impairments |                |               | 100,000                        |
| 9. Assistive Technology  |                |               | 259,149                        |
| 10a. M-K Coordinator of Student Services                       |                |               | 71,500                         |
| 10b. M-K Research Assistant                                    |                |               | 33,300                         |
| 11. Developing a special education policy framework            |                | 13,800        |                                |
| 12. Study of funding requirements                              |                | 8,000         |                                |
| 13. Strategies for prevention and early                        |                |               |                                |

|   |         |           |
|---|---------|-----------|
| identification/intervention                                 | 30,000  |           |
| (a) family intervention and support                         |         |           |
| (b) best practices study                                    | 11,900  |           |
| (c) early identification and intervention                   | 30,000  | 246,050   |
| 14. Strengthening teacher education                         | 5500    |           |
| 15. Increasing Mi'kmaq graduates from professional programs |         |           |
| (a) research study  | 5,000   |           |
| (b) recruitment and retention services                      |         | 60,000    |
| (c) student support   |         | 100,000   |
| 16. Overseeing the implementation of recommendations        |         | 8,000     |
| TOTAL   | 130,200 | 7,135,547 |