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Equal Educational Opportunity for Native Students: Funding the Dream

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Equal special education opportunity for Native students requires a variety of special services, all of which require special funding. A three-year pilot project in special education undertaken by the First Nations Education Council of Quebec (FNEC) provided the first opportunity in Canada to analyze the cost of funding such services in First Nations communities. This article summarizes the methodology and results of a detailed analysis of the costs of special and regular education in FNEC communities. Among the most important findings are that the per-pupil costs of delivering special education services in FNEC communities were not unusually high according to any relevant basis of comparison, but that total costs were high because of high incidence rates of special needs.

Introduction

Special education programs and resources are accessible to children in provincial school systems which are governed by the principle that all children, regardless of disability, can be educated to lead productive lives ... Special education resources are crucial to the success of school under First Nations jurisdiction. (National Indian Brotherhood/Assembly of First Nations, 1988, p. 98).

The special education resources referred to in the above statement by the Assembly of First Nations are a critical means for achieving equal educational opportunity (EEO) for Native students. Simply put, EEO means the right of everyone to participate in and benefit from publicly supported education. As discussed in a companion article by Smith and Martin (2000), the provision of EEO can be conceptualized in terms of inputs, throughputs, and outputs. Funding and other forms of resources are considered as inputs in this model, enabling elements that support the actual provision of services that in turn lead to the desired results. Providing adequate funding—even if one can determine what this entails (Paquette, 1989)—will not ensure that appropriate services will be provided, nor that the desired results will be obtained. However, the failure to provide adequate funding will almost certainly ensure that neither appropriate services nor desired results will occur (Allison, 1984).

Funding Special Education Needs

Although the importance of funding in meeting special educational needs seems obvious, educators and others often ignore the subject, except of course, to advocate for more funds. The details are left to "finance people": methodologically

oriented technocrats. As Bernstein (1993) puts it: "Finance becomes the secret language spoken only by the initiated" (p. 103). However, this same author sounds the following note of caution:

When program experts defer to financial experts, they cede to them important, sometimes invisible but no less powerful control over the implementation of policy. The result is that we have developed special education delivery systems in which the tail wags the dog and the cart pushes the horse. (p. 104)

We agree with Bernstein that administrators and educators responsible for special education service delivery can and should understand funding policy if they are to ensure that the latter supports the former and does not take on a life of its own.

Funding as an equalizer of educational opportunities raises a number of key policy questions. For the purposes of this article, two seem particularly important. First, what does it cost to provide different types of special education services in a variety of settings? Second, what criteria, guidelines, or other conditions should be used to determine how funds for these services should be allocated?

For several years, the First Nations Education Council of Quebec (FNEC) has been actively engaged in seeking to answer these questions and to secure adequate and ongoing funding for children with special needs, both in their communities and elsewhere. The purpose of this article is to discuss these efforts and specifically how a recent FNEC study contributes to the development of a national funding policy for children with special needs in First Nations communities in Canada. Vocabulary is an important element in public policy discussions as various terms are used to enhance one group or position or degrade others. We recognize that in the contemporary debate over inclusive education, special education is often associated with a particular approach to the education of children with special needs. We wish to point out that we use this term because it is found throughout the literature on the funding of special needs and do so without any assumed limitations on the mode or place of service delivery. Furthermore, in the light of the above comments on the comprehensibility of material about funding, we endeavor to keep both financial jargon and displays of data to a minimum.

Background to the FNEC Study

For more than a decade the FNEC has conducted a vigorous and persistent lobbying campaign to secure funding for special education services in its member communities, which range from large urban to small isolated communities. In addition to their Aboriginal languages, some communities use French as their primary functional language whereas others use English. Their schools thus frequently provide services in three languages (English, French, and an Aboriginal language).

In 1997 FNEC at last obtained funding from Indian and Northern Affairs Canada (INAC) for a three-year special education pilot project (Smith & Martin, 2000). During the first two years of the project the attention and energy of FNEC's special education committee was focused on getting special education services up and running in member communities. However, in 1999, with the final year of the project looming just ahead, the committee needed empirical data on special education spending to use as a basis for negotiations with INAC, first to secure bridge

funding to continue FNEC's fledgling special education services beyond the rapidly expiring pilot project, and second to obtain permanent funding for special education in member communities, and eventually in First Nations communities across Canada.

We knew from the outset that participation in the study would be labor-intensive and that not all FNEC communities would choose to participate. In the end seven communities chose to participate. These communities, a mixture of urban, remote, large, small, English-speaking, and French-speaking reserves, included 43% of the total FNEC enrollment of 4,367 students during the 1999-2000 school year.

Determining the Costs of Special Education

Funding of education on reserves in Canada is notoriously messy and complicated. An increasing number of block-funding agreements with local communities for all social services including education make it impossible to demarcate clearly funds for education in general or for special education in particular. Given this situation we concluded that we would have to gather all the pieces of fiscal data needed at the community level. We also realized that we would have to study regular as well as special education spending before we could assemble a complete picture of special education needs.

Gathering the Pieces

It is relatively easy to get policy-makers to agree that special education costs more than regular education, but not so easy to agree on how much more. Accordingly, a major challenge confronting any study of special education costs is to separate special from regular education costs and then distinguish among different special education costs (Chambers, 1999). The latter is often done on the basis of different types of special needs (referred to as categories of disability or exceptionality), based on the notion that different costs are associated with different disabilities. For the purposes of the pilot project and the funding study, FNEC defined eight such categories (4 mild and 4 severe), which are listed in Table 1.

When students with special needs are educated separately from regular students, separating direct service costs is relatively easy. Conversely, separating such costs is relatively difficult when these students are integrated in regular classrooms. Except for specific services such as integration aides, costs for shared services are generally attributed to regular or special education by a simple head count of the various categories of students receiving the service, by some weighting formula, or by actual time spent with different students. Other costs, of course, cannot be specifically attributed to special or regular education in a rationally defensible way (e.g., heating costs), and they too must be split between special and regular education in some meaningful way such as assigning them in proportion to direct services costs.

In the FNEC study we first determined the total amounts spent in the community for personnel and other expenditures. Then we collected extensive cost data by type of personnel (e.g., teacher, aide) associated with various direct-service units (e.g., class, specialized withdrawal program). These data included student counts (regular and by disability category) and full-time-equivalent (FTE) person-

Table 1. FNEC Disability Categories

Mild Cluster	Severe Cluster
(S1) mild behavioral difficulties	((S5) moderate to severe learning and behavioral difficulties
(S2) moderate and severe behavioral difficulties	((S6) sensorial/physical disabilities
(S3) mild learning difficulties (LD)	((S7) developmental disabilities
(S4) moderate to severe LD	((S8) multiple disabilities

nel counts. Whenever a teacher provided us with a plausible breakdown of his or her time spent with regular students or special-need students (about two thirds of the teachers did so), we relied on these self-reported teacher time data to apportion that teacher's FTE count for that class or other service unit. If no such teacher data were provided, we used weighted student counts (based on current provincial funding formulae that use, or can be translated into, such weightings) to allocate the teacher's (or other staff member's) FTE count to different student categories for each unit of service.

Assembling the Picture

Following the above steps, we then had all the pieces of data needed to put together a complete picture of the costs of regular and special education. First we summed all the FTE counts for each type of personnel for each student category at each level of instruction (kindergarten, elementary, secondary). These totals were then converted to dollar amounts for each student category in proportion to the FTE count for that category. Thus, for example, if the teacher FTE for category 51 was 15 out of a total of 100 FTE teachers, then 15% of the total salary cost for teachers was allocated to 51.

By this point, we had allocated all personnel costs for direct service costs in the community to each of our student categories. We then allocated all other costs by student category using weighted or unweighted student counts as appropriate. This enabled us to draw a picture for each community because we could associate a total cost amount with a given number of students for each category, and therefore determine the per-capita cost for each category, as well as for regular students, all special-needs students, and for clusters of students with mild and severe disabilities. In order to draw an overall picture for all communities participating in the study, we then summed these results for all seven communities in the study.

The final step in completing the picture of special education costs was to determine the marginal cost for each category of disability, which is equal to costs in excess of the per-student amount for regular students. Thus, for example, if the average cost per regular student is \$7,000 and the average cost per student in category 51 is \$10,500, then the marginal cost for 51 students is \$3,500. As we see below, determining the marginal cost is important because it is this figure that

answers the question asked above: How much more does special education cost compared with regular education?

Developing Allocation Formulae

The marginal costs determined above were then used as a basis to develop formulae to allocate funds for special needs. The advantage of this approach is that funding is based on the actual costs rather than on some hypothetically appropriate amount. The disadvantage is that this approach may underestimate the amount required if actual spending is low because of insufficient revenues. In other words, low amounts spent are taken as an expression of need rather than a lack of funds. In order to take into account any such problems, we surveyed the communities for data on unmet needs. On the basis of these data we increased the per-capita expenditure amounts determined above to account for unmet needs. Together with some minor technical adjustments, we derived various funding norms as described below.

Categorical Approaches

The allocation of funds for education, typically by provincial and state grants to school districts, is often made on a per-capita basis. That is, the state provides a grant of \$X per student or \$X per elementary student and \$Y per secondary student. Consequently, one of the traditional approaches to special education funding is to provide per-capita amounts that are different for each category of disability. Using the same example shown above, the state might allocate \$7,000 for every elementary student (regular and special) registered in the district, plus an additional \$3,500 for each student with mild behavioral difficulties (51). An alternative to this approach is to use one amount for funding and to weight the student count to provide additional funds for special needs. Although this alternative has a different appearance, the effect is the same. Thus instead of providing an additional \$3,500 (50% more than the amount for a regular student) for each student in 51 ($\$10,500 \times 1$), the state could weight these students by a factor of 1.5, thereby providing the same amount ($\$7,000 \times 1.5$).

The costing exercise described above dovetails with this approach and enabled us to derive categorical funding norms for each level of instruction. These amounts varied, for example, from \$3,170 for students with mild LD to \$16,777 for those with multiple disabilities at the elementary level. It should be noted that these are the marginal amounts to be provided for each student in the categories listed, that is, spending in addition to the amount provided for regular education purposes.

Categorical funding formulae have the advantage of directing funds toward student need, provided that the different amounts per category reflect different costs. Inherent in this approach, however, is the requirement to label students and count (and report) the number of students present in each category. This creates a powerful incentive to identify children in more severe and therefore higher revenue-producing categories. As a result, noncategorical approaches are commonly used.

Noncategorical and Hybrid Approaches

The opposite extreme to categorical formulae is census-based funding. Such a formula is simplicity itself as the state merely allocates a fixed per-capita amount for special needs to be paid for every student (regular and special). There is no labeling or counting of special needs students, but by the same token funding does not respond to changes in student need. In between these two extremes is a flat grant approach. In this case, the state also allocates a fixed per-capita amount for special needs, but it is paid on the basis of the total number of special students. The labeling and counting of special needs students does not extend to specific categories, so the allocation of funds is only responsive to changes in the total number of special students, not to changes in individual categories.

Flat or census grants may be developed to cover all categories of special needs. Alternatively, they may be designed to cover a subset of special needs categories such as the mild and severe clusters shown in Table 1. Moreover, governments may use some form of hybrid approach that combines different types of formulae for different groups of students, for example, a flat grant for students with mild disabilities and a categorical formula for more severe needs.

We calculated both flat and census funding norms for the mild and severe clusters of disability at each level of instruction. We did this by working backward from the total amount generated by the categorical funding norms for each of these clusters. To take the example of mild disabilities at the secondary level, we found that applying the categorical norms to the entire special needs population in this cluster in all FNEC communities generated \$4,538,976 for 546 students. Accordingly, we calculated a flat grant of \$8,507 ($\$4,538,976 \div 546$) and noting that there was a total of 1,234 students (regular and special) at the secondary level, a census grant of \$3,723 ($\$4,538,976 \div 1,234$).

This method of calculating flat and census grants thus hinges on two major factors: first, the categorical funding norms described above; and second, the overall incidence rate of special needs students in FNEC communities. Incidence rates are simply the percentage of the student population at a given level of instruction that has been identified in a special needs category. Both grants reflect the mix of the student population in FNEC communities, as shown in Table 2.

Higher incidence rates, which reflect a greater percentage of students with special needs, will produce higher amounts for these grants, especially if these higher numbers are found in the high-cost categories. The incidence rates shown in Table 2 are exceptionally high in comparison with state and provincial rates, which tend to vary between 10% and 15% of overall enrollment. In contrast, nearly half of the FNEC student population has been identified as having special leaning needs. High incidence rates, however, especially in mild disability categories, are a well-known characteristic of socially and economically disadvantaged populations, so high incidence rates are not surprising in the socioeconomic conditions of FNEC communities.

In addition to these flat and census grants, we developed two hybrid formulae: first, a categorical-flat grant model; second, a categorical-census grant model. Funding for the four mild categories of disability (S1-S4) is provided in the first

Table 2. Incidence Rates Across All FNEC Communities

Cluster Category	Kindergarten	Elementary	Secondary	All Levels
<i>Mild</i>				
Mild behavioral	2.2%	8.4%	5.1%	6.3%
Mod-severe behavioral	1.0%	4.4%	3.6%	3.6%
Mild LD	9.4%	13.6%	10.3%	11.9%
Mod-severe LD	3.7%	13.5%	24.7%	14.9%
Sub-total	16.3%	39.9%	43.8%	36.7%
<i>Severe</i>				
Mod-severe LD/behavioral	1.5%	3.7%	13.8%	6.2%
Sensorial/Physical	2.4%	1.9%	0.6%	1.6%
Developmental	4.3%	2.2%	0.8%	2.2%
Multiple disabilities	0.8%	0.6%	0.9%	0.7%
Sub-total	9.0%	8.4%	16.1%	10.7%
<i>All Special</i>				
Total	25.3%	48.3%	59.9%	47.4%

hybrid model by a flat grant and in the second by a census grant. Both use categorical grants for the four severe categories of disability (S5-S8).

Applying the Formulae

Going to Scale

Going to scale with any proposal involves moving it from the pilot sample (7 communities) to application in a wider group, such as FNEC, or perhaps the entire population, which in this case means First Nations communities throughout Canada. Accordingly, the next step in our analysis was to use the funding norms from the previous step to test the impact on each FNEC community of the five funding models we had preselected as possibly interesting and relevant in the FNEC situation: categorical, flat, census, flat-categorical, and census-categorical.

Because all the norms were derived from the same underlying data, funding generated for FNEC as a whole is the same in all five models. A simplified summary of the results is shown in Table 3.

The \$13,891,754 for all special needs students (2,071) is more than four times the \$3,437,636 in "new money" FNEC obtained for each year of the pilot project and equals \$6,708 per student. To the extent that our analysis captures an appropriate allocation of resources, then, FNEC communities were using resources intended for regular education and for other educational and social programs to subsidize massively their special education programs. It is also important to underscore that the high incidence rates shown above (Table 2), not unusually high per-student spending on special education, account for the relatively high total cost of special education in FNEC communities.

As the pilot project drew to a close, it became apparent that the national agenda—finding a permanent funding formula for all First Nations communities

Table 3. Application of the Funding Norms to FNEC as a Whole

Cluster	Kindergarten	Elementary	Secondary	All Levels
Mild	\$388,731	\$4,133,012	\$4,593,876	\$9,115,619
Severe	\$369,393	\$2,149,965	\$2,256,652	\$4,776,134
Total	\$758,124	\$6,282,977	\$6,850,528	\$13,891,754

in Canada—was rapidly displacing the regional agenda of ongoing funding for FNEC communities. We also became aware that our data were the only significant data on the cost of special education services anywhere in Canada for First-Nations students living on reserve. Accordingly, we were anxious to apply the formulae to all First-Nations communities to see the potential result of this work at a national level.

In order to apply all five formulae, we needed student population counts for each of the categories listed in Table 1, as well as the number of regular students in each community. Unfortunately, such data were not only unavailable to us, they did not exist; the only student data we could access were total student population counts for all levels of instruction according to the 1999 nominal rolls. We were, therefore, left with only one option, to apply a census grant formula using an amount that covered all special needs at all levels (\$3,181 per student). The results of this application are shown in Table 4.

This analysis provides a sense of the magnitude of federal funding required, but does not provide any insight into the differences that would arise from using one formula over another, let alone the impact on individual communities. The best we could do in this regard was to examine alternative funding-formula impacts for the 15 communities of the FNEC.

Simulating the Impact

Although, as noted above, the five funding models produced the same total results for FNEC as a whole, their impact varied on individual communities. The differences were a reflection of variance in incidence rates between a given community and those observed for FNEC overall. To examine this impact, we evaluated funding results for each community from the three basic approaches considered: categorical, flat, and census.

In order to test these three models, we assigned an index value of 1.0 to the revenue amount generated (for all educational levels combined) by the full categorical funding model and corresponding values to the amounts generated by the flat and census-based grants. Thus, for example, if a flat grant generated 86% of the amount obtained by the categorical model, the index value would be 0.86; if it generated 120% of the amount produced by the full categorical model, the index value would be 1.20.

In general, a community with higher-than-average incidence rates obtained a lower level of funding from the flat or census models, whereas a community with lower-than-average incidence rates received a higher level of funding from these models. Just how these general patterns show themselves, however, depends on

Table 4. Application of the Census Formula Across Canada

Region	Population	Amount
Atlantic	2,588	\$8,232,428
Quebec/Labrador	6,921	\$22,015,701
Ontario	15,165	\$48,239,865
Manitoba	16,274	\$51,767,594
Saskatchewan	13,640	\$43,388,840
Alberta	11,428	\$36,352,468
Yukon	1,766	\$5,617,646
British Columbia	5,575	\$17,734,075
Total	73,357	\$233,348,617

the population mix of regular and special needs students at each of the three levels of instruction.

An examination of specific community cases reveals the complexity of elements that influence the dollar-yield of the alternative funding formulae when incidence rates depart significantly from those used in the formulae (in this case, FNEC-wide averages). Despite this complexity, the analysis highlights advantages and disadvantages of possible alternative approaches to funding. Given the actual distribution of incidence in FNEC communities at the time of this study, one formula would prove to be more advantageous to some communities and less so to others. Moreover, the relative advantage or disadvantage of a formula for a given community is likely to change over time as the mix of its population changes. It is not possible to predict accurately, either by cluster or by category, how the special-needs population in these communities or those across the country will change over time, but we can be sure that changes will occur and that they will be affected by the funding formula chosen.

Conclusion

Cost-based approaches to the allocation of resources for special education services have the obvious advantage of grounding the determination of funding levels in empirical data and thereby enabling us to answer our first question: How much more does special education really cost? We are, however, conscious of the small size of our sample, which makes it difficult to generalize from these data. If the communities surveyed were under- or overspending on special education services, then the funding norms we generated would not provide an appropriate basis for a national formula, either by being too skimpy or too generous.

As noted above, our experience suggested that expenditures did not cover all existing needs and we added an amount to compensate for these unmet needs. We conclude that the norms generated by this analysis provide an adequate starting point for the development of a national funding policy. Larger-scale studies could—and in our view should—be undertaken in the future to revise these norms and fine-tune any formulae adopted. Kelly (1985) offers the only generally available overview of basic arrangements for funding special education in Canada.

However, this work is limited to provincial approaches to funding special education, without any data about spending, is not presented within any particular conceptual framework, and in any case is now seriously out of date.

The evidence from our analysis also supports the wisdom of using separate grant methods for mild and severe clusters of special need and calls attention to the complementary risks associated with census-based funding for service providers if special-needs incidence rates increase and for the funder if they decrease. If the special-needs mix of the student population in First-Nations communities across the country resembles that of the 15 FNEC communities we analyzed, the differential impact on various communities summarized briefly above would offer some general guidance as to what to expect from different approaches to funding special education nationally.

The exercise has thrown into bold relief for us the exceptionally high special-needs incidence rates that can occur in First Nations schools and the reality that, even when per-student funding for regular education is not particularly high and even in the absence of an unusually high ratio of special education to regular education cost, overall special education costs will be high owing to these high incidence rates.

Finally, our results, particularly from the community case analyses, recall that in the art of funding education, what one sees depends very much on where one sits. Whatever the conventional arguments about criteria for good special education funding arrangements (Parrish & Wolman, 1999; Smith, 1992), the view of the service provider about the most desirable funding package will always be significantly at odds with that of the agency responsible for funding those services.

It follows from this analysis that the federal government needs to invest more than a quarter of a billion dollars annually in special education services for on-reserve status-Indian students across Canada. The most important point here is that this expenditure is an investment in the future of Aboriginal students with special needs, an investment, moreover, likely to pay rich dividends over time in reducing welfare and penal costs, and, more important, in enhanced Aboriginal contributions to Canadian society and to the Canadian economy. At a time of large federal budget surpluses, whether and how the federal government responds to this need will be an important test of its professed renewed commitment to EEO for Native students in this country.

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