

## A Dream Comes True

### University research in the service of schools

*To the average citizen, those who work in schools and those who work in universities are part of the same team. But in reality those who work in universities on behalf of schools often face from many colleagues an acute antipathy that appears to have the obduracy of the irrational. Dussault's experiences in directing the recently founded Institut National de la Recherche Scientifique, for Education, document some of the tensions that can be created by those who have the leisure for university politics, and he vehemently expresses a reaction that is perhaps too often swallowed unheard. He describes with some pride the achievements of his institution, which in applied research uses procedures no doubt uncomfortable to those for whom the alternative to pure science can only be impure.*

When I was invited to deliver this address, it was suggested that I speak of INRS-Education and of the problems related to the carrying out of research in such an institution. That I have done, but in a way that will surprise some and shock others. For I have chosen to resort to an experiential rather than a topical account and to speak in an intimate, quasi-dialogue way rather than follow the rules of scientific writing. I shall first go ten years back and comment on the traditional Quebec university milieu, to which I did belong for a decade before coming to INRS. What I intend in doing is to show, by contrast, what INRS-Education is not.

In May 1969 I came back to the Faculty of Education of Laval University after my doctoral studies, under the illusion that I was not a nobody coming from nowhere. I had lived for three years at Teachers College, Columbia University, where I had studied under the supervision of Margaret Lindsey and Arno A. Bellack, and where I had the opportunity and privilege to meet, and work with — to name just a few — people like Dwayne Huebner, Bruce R. Joyce, Philip Phenix, Allan B. Knox, and Alice Miel. My degree earned, and with a book in print at Teachers College Press, I was nurturing the very naive hope

that I could contribute to the advancement of teacher education programs at Laval, since that was my major field.

Disillusion was not long in coming. The Faculty of Education of Laval, believe it or not, had just closed its departments of preschool and elementary education and of secondary education; a new dean had established his headquarters on the fourteenth floor of an office tower, sheltered from the daily life of the Faculty; he had surrounded himself with advisers who did not always escape leaving the impression that they were more interested in power and in reforming structures than in the quality of curricula, teaching, and research; the Faculty senate almost never met, and had not succeeded in giving a real voice to the representatives of the milieu or the students; requests for help sent to the Faculty by schools and school boards were moving from office to office, before, in many instances, going to the waste basket.

The greeting I had was simple. A secretary handed me a key that opened an office space where, I must admit, a phone had kindly been installed. From my window, I had a magnificent view of the green areas of the campus and of the city of Sillery. It was an unambiguous invitation to devote my professional life to contemplation. Because — and even today this seems unbelievable — my department chairman did not give me any teaching assignment. And when I suggested I might develop and implement an experimental teacher education program that would build upon “Lagrone’s Proposal,”<sup>1</sup> that had just been published by the American Association of Colleges for Teacher Education, he invited me to try my luck at the new-born University of Québec.

I stayed there three years. As I wrote to the Rector, Larkin Kerwin, in July 1972, during those three years I could have been paid for doing nothing. Waste of talent, may be; waste of public funds, certainly. I think it scandalous that a private university receiving eighty per cent of its yearly budget from the state should hire personnel in order to put them on the shelf.

To escape idleness without resigning from Laval, I did knock as early as October 1969 at the door of the University of Quebec, as my department chairman had maliciously advised me. It was at Chicoutimi that we were to experiment with the Lagrone proposal.

It came very close to success. After two and a half years, faculty members from the departments of Education, Physics, Mathematics and Literature of the University of Québec at Chicoutimi, along with some fifteen secondary teachers of the Saguenay-Lac St-Jean area, had translated and adapted the American resources, had written syllabuses for the new program, and had acquired the competencies required to offer the experimental program with minimum help from outside. Approved by the various boards and committees that had to scrutinize it, and given special and sufficient funding, the experimental program was ready to enrol its first students. And it was at this point that the faculty members of the Department of Education of Chicoutimi, in the summer or early

fall of 1972, decided by a very close count on a secret ballot to stop the project.

I suspect that this decision was dictated by envy and professional jealousy more than by anything else. Many new faculty members had just been hired. These newcomers had necessarily been unable to take part in the project and could hardly expect key positions in it. Unable to accept that the old staff should have the limelight (most of these "oldtimers" were former Normal School Teachers who have been "promoted" to university professor status when the University of Québec at Chicoutimi was founded in 1969), and unable to take control, the newcomers preferred to shelve the project.

Three years after my return from Columbia, I felt I was aging rapidly, I was less and less sure of what I had thought to be my talents as a scholar, and I had despaired of the capacity of Faculties and Departments of Education to play an original and useful role in Québec society and culture. This is when I was offered what I still consider the most important opportunity I have had in my professional life: the opportunity to join the National Institute for Scientific Research, as founder and first chairman of INRS-Education.

### **INRS-Education: some facts**

Let me remind you first that, contrary to what many people believe, the National Institute for Scientific Research is not governmental but one of the ten institutions that constitute the University of Québec. The Institute though is not a university like others in Québec. It has no baccalaureate programs, and very few masters and doctoral programs. In fact, the teaching function at INRS is marginal, the faculty members not being allowed to spend more than 20% of their time in graduate teaching, and none in undergraduate work.

At the Institute the main task is research. But again, not any kind of research. Not free research, but programmed research oriented toward solving major problems that confront Québec society. Not individual but team research. Not disciplinary research, but thematic research in identified areas: water, energy, oceanology, petroleum, education, urbanisation, health, telecommunications. As chairman of INRS-Education, I was given a clear mandate: to create a center of applied research capable of contributing to the improvement of Québec education. In other words, I was given the opportunity to prove that my dream of seeing university research in education put to the service of the schools was not an utopia.

I think we have succeeded in making this dream a reality.

From 1972 to 1979, that is in seven years, the researchers of INRS-Education have carried through two major programs of research: the PERPE program and the SAGE program. PERPE is a series of questionnaires for the

evaluation of teaching by the students, not for administrative purposes but with a view to helping the teacher to see more clearly the effects of his professional activity. SAGE is a system of individualized instruction in French, mathematics, English as a second language, and the sciences, for the learners of the second half of the primary school; that is, for children of 9, 10 and 11 years of age.

If I consider and use as a criterion the utilization rate of the products of these two major research programs by the milieu, I may rightly believe (a) that they were and still are an appropriate answer to important needs and (b) that they prove that university research can provide the schools with useful tools. As a matter of fact, the PERPE or SPOT Questionnaires are used year in and year out by more than fifteen hundred groups of students, either at the secondary level or in our very own CEGEPS or in various college or university departments. On the other hand, since 1973-74 SAGE has been used by more than 2,000 children in 46 experimental or quasi-experimental classes. These 46 classes are found in 10 different schools of 5 school districts.

These research programs that have had such impact on the milieu were carried out by a limited number of people. On the average there have been between 25 and 30 persons at INRS-Education during the last seven years; that is, one chairman, six professor-researchers, five professionals, one technician, five secretaries, a variable number of research assistants and other temporary personnel of all categories.

The Centre's annual budget has been as modest as its personnel. All sources of income considered (statutory grants from the Ministry of Education, research grants, and research contracts) and all expenses taken into account (including rent, phone costs, insurance, travel and printing expenses, as well as salaries) the Centre's budget was of the order of \$400,000 in 1972-73 and reached almost \$900,000 in 1978-79.

Such a limited budget and personnel would not have allowed us to do what we did if we had not made the school our main and almost only laboratory; and if we had not allied ourselves in our work with, as partners, teachers, school principals, supervisors, school board administrators, professionals and high-ranking officers from various departments of the Ministry of Education, some professors from other universities in Quebec, and researchers from abroad. This association is not reflected in the budgets nor in the official lists of employees.

But SAGE and PERPE have not been our only centres of interest. We have also conducted research on the teaching and learning of French at the secondary and primary level; run joint research ventures with the University of Sherbrooke and the Télé-University of Québec University; fulfilled contracts for the Superior Council of Education, the Conseil du Statut de la Femme, the St. Boniface College (Manitoba), the Québec Ministry of Cultural Affairs, and the Munroe Company. We have established and maintained contacts with researchers or research teams from Belgium, France and Argentina.

At a more academic level, let me mention the writings of INRS-Education that are accessible to any interested researcher as well as to professionals of the school system, since the writings are listed in various national and international indexes. From July 1, 1972 to May 1, 1979 the members of INRS-Education have written and circulated 378 papers of all sorts (research reports, articles in periodicals, books or chapters in books, tests, papers delivered at national or international conventions, and so on). To these papers one must add 903 teaching-learning units produced for SAGE, and as many criterion-referenced tests.

Well aware that the numbers and other data that I have just recited do not do justice to what my colleagues have done during the last seven years, I will nevertheless terminate at this point my account of the nature of our work and of our ways of associating with the milieu, because I would like to spend some time considering both those factors that I feel have enabled us to do whatever we have done, and the major difficulties that we have regularly encountered in our daily functioning.

It is not without difficulty, both externally and internally, that we have succeeded in placing ourselves as researchers at the service of learners.

### **Major difficulties encountered — externally**

I could use up all my space dealing with the many difficulties from without that we have had to cope with. The Ministry of Education has made one exception to its rule of generosity to each and every Québec university. And it is INRS that has been the exception. Never, in the ten years history of INRS, has the statutory grant from the Ministry of Education corresponded to 100% of the payroll of the personnel having tenure or under longterm contracts. In some years, the grant of the Ministry to INRS was as little as 60% of the regular mandatory payroll. One can imagine the managerial and financial difficulties of a public and non-profit organization that at the start of any financial year has to look for, and find enough outside money to make up for, the 10 to 40 per cent difference between its certified revenues and its essential salary commitments.

But the financing difficulties were in a sense light when compared with the political difficulties made for INRS by the traditional private university network in Québec. Things happen as if the traditional university community, home of free, individualistic research, defender of an unlimited and to my mind often misunderstood academic freedom, were unable to tolerate the existence of an institution deeply concerned with the needs of the people, and dedicated to applied, planned research that is team conducted.

Almost each year since 1973 we have observed the tendency of the FCAC committee on education, controlled by representatives from the traditional, well-established, well-funded and private universities, either to almost completely ignore INRS-Education, or to fund the projects submitted by the Centre in inverse ratio to the priorities that we had attached to them. I do not hesitate to say that

INRS-Education has since its very beginnings been the target of attacks as arbitrary as they were stubborn on the part of some Québec university professors. It is as if our presence and work in the real school milieu were inducing the emotional manifestations of a blind sadism.

I cannot resist the temptation to let you know about certain judgments, passed early in 1979, by a visiting committee of the FCAC responsible for evaluating the research team of SAGE. Dealing with the “scientific outputs” of INRS-Education in SAGE, the committee wrote that the number of “papers read . . . and of internal reports” is “judged average by the Committee.” (The committee had counted 32 such reports and papers while we had handed in a list comprising 65 titles.) The report goes on to say that “the Committee thinks that the quality of these scientific outputs . . . may be judged below average” and comes to the conclusion that the Ministry of Education should “invite a team independent of INRS to proceed to a systematic study of (SAGE) as a scientific ideology”. I make no pretension whatsoever of asserting that the scientific output of SAGE is of exceptional, well-above-average quality, nor do I wish to ask that the Centre activities be exempt from critical evaluations or analyses. But I do object to a committee, of which three members out of four are university people, making judgments without making explicit or even mentioning the criteria on which these judgments rest and at the end sending to ideological trial an undertaking that is so obviously empirical and experimental in nature. Such a way of going about research evaluation is more akin to McCarthyism than to scientific inquiry.

But we have survived the difficulties and attacks coming from outside. And if we have done so it is most particularly, I think, because of the high level of satisfaction of those learners, teachers, administrators and parents for whom and with whom we have never stopped working. For us, as for people in industry and commerce, customer’s satisfaction is the best insurance policy against bankruptcy.

### **Major internal difficulties**

The internal difficulties have been a much more serious threat to our survival. I will say a word about the three difficulties coming from within that to my mind have been the major ones.

First, the difficulty of recruiting professors. INRS is a university so unlike the others that it is very difficult for the Institute, in putting together its faculty, to recruit researchers whose competence and reputation are already well established. This difficulty obviously is related to the painful financial situation typical of the Institute. But it comes much more from the hard fact that at INRS there is no place for the free-lance researcher, and much less room than in other universities for fundamental research; and from the fact also that when they agree to join INRS, the professor-researchers also accept the exclusivity of their professional service.<sup>2</sup> That partly explains why, of the eighteen professors who

at one time or another have been members of INRS-Education faculty between 1972 and 1979, less than a third (that is 5 out of 18) had had any experience as full-time university professors before joining INRS, the other two thirds having had their career at the primary, secondary, or college levels.

The same factors that make recruiting difficult are also responsible for a professional turn-over that has the advantage of preventing the aging of the Faculty but at the same time makes the pursuit of the Centre's objectives hard and hazardous. Of the 18 professors who have come to INRS-Education in seven years, only six are still there, and of those six, two have less than one year of service.

The third and last internal difficulty that I will consider springs from an essential characteristic of INRS and of each of its eight Centres, a characteristic that, on the other hand, is I think responsible for the greatest achievements of the Institute — as I shall try to show later. That is the fact that at the Institute research is programmed.

In order to function adequately and efficiently at INRS-Education, any new researcher (and the professor-researcher most of all) must possess in addition to talent, competence, and initiative, the humility to cooperate in projects the design and content of which have been delineated by those who were at the Centre before he or she arrived. For the newcomer, a critical mind, creative as it may be, is not enough; it must go along with a positive or favorable presumption toward the Centre's operating projects and programs. When a researcher or a group of researchers, on a plea of opening new trails, refuses to travel on the existing highways, then difficulties are unavoidable. These difficulties may take on the appearance of a conflict between academic generations, but at INRS-Education they have rather developed from a failure to accept what is part of the very nature of INRS: programmed research. If a newly-arrived researcher, whatever his rank may be, cannot accept the initial constraints of programmed research, he or she will have very few other choices than to leave after a few months, either voluntarily or because of a working climate that rapidly becomes unbearable.<sup>3</sup>

Confronted with such difficulties arising from within and from without, I think I may assert that it is almost a miracle that INRS-Education has stayed alive for seven years and has retained so much energy and vitality that one is entitled to believe it will not crash for a long time to come.

## **Factors in the success of INRS-Education**

I would like now, before coming to an end, to review what I feel are the causes of what I have not hesitated to call the success of INRS-Education.

I can identify three causes or groups of causes that explain for me the suc-

cess of INRS-Education: the defining of a research policy or platform and the stating of general objectives that follow from it; a rigorous programming, democratically done and taking into account the needs of the educational system; team work that strives to maintain as high a level of collegueship as possible, and tries constantly to adjust itself according to the feedback given by the people in schools.

By research policy or platform, I mean a series of principles that lead to the statement of general objectives and that serve as criteria for the selection as well as for the evaluation of the Centre's activities. Our research policy was laid down early in 1974, after a year and a half of maturing, as a first step in delineating our first five-year plan. This policy is expressed in the following statements:

- 1— The *learner* is both the most important client of the educational system and the principal agent of his education.
- 2— In accordance with this basic principle that for them has ethical value, the researchers of INRS-Education deem it necessary that the *learner* be the center of their concerns.

(As a corollary to this principle, we hold that teachers, school administrators, curricula, educational technology, teacher-student interactions, should not in our own research endeavours be studied for and in themselves, but only insofar as they bear relationships to the *learner*).

- 3— The research carried out at INRS-Education must either be directly profitable, or be shown to be potentially although indirectly profitable, to *learners* at one or another point of the educational continuum.

(From this principle it follows that although recognizing the advisability and necessity of fundamental research, INRS-Education has decided upon investing most of its resources in applied research.)

- 4— In order to make their work as profitable as possible to *learners*, the researchers of INRS-Education must by all means be available to move from laboratory to field experiences and from pilot projects within exceptional settings to experimental projects carried out in normal conditions.

(This principle requires that the Centre use the school as its main laboratory and that it bring the school personnel to work as partners in research endeavours. In other words, it is required of INRS-Education researchers that they resist entrenching themselves in the classical ivory tower and that they accept wetting their feet and getting their hands dirty, at the risk of appearing less scientific than they really are.)

- 5— The learning of French is a domain that cannot cease to be of high priority



for educational research in Quebec.

## **Subjecting oneself to objectives**

From these principles, we have drawn three general objectives:

- A— To develop (that is to create, to experiment with, and to evaluate) educational systems or sub-systems that stand as true alternatives to the existing ways of schooling, and that allow the learner to become the master and the craftsman of his own cultural development.
- B— To promote, through scientific evaluation, the development and the effectiveness of educational systems or sub-systems that aim to subordinate themselves to the learner's growth.
- C— To answer, inasmuch as we can, the demands made by the milieu for applied research, training, and consulting services

If they are to escape banality, policy statements and general objectives must be translated into specific objectives or research projects, which in turn must be structured in series that spell out timetables and the required resources; that is what I call research planning or programming.

To plan is to arrange in order. In its first five-year plan (1974), INRS-Education designed nine series of specific objectives or research projects, series envisaged as parallel in time but integrated in an overall structure. After five years, one may note that of the 54 objectives in the plan, 26 have been substantially achieved, 10 have been partially reached, while 18 others have not been attained or have simply not been pursued.

In any situation where the resources are not unlimited, to plan is also to choose; that is, to plan is to adopt some objectives and to set aside some others; it is to define priorities. As soon as 1974 our priority was clearly identified: we were to work toward operationalizing the Ministry of Education policy of "le progrès continu" (continuous progress) at the elementary school level. That forced some choices upon us. In view of our limited resources we decided to give priority to language (both French and English) and to Mathematics. That also forced sacrifices: while SAGE was taking half of the annual Centre budget, the other half was shared by three other programs. One can easily imagine how many research projects have slept in the faculty's drawers or have reached but a minimal level of activity. All that would not have been possible, and neither SAGE or INRS-Education would be what they are today, if each member of the faculty had been jealous of his own privileges and preoccupied by his own career rather than eager to take part in a series of activities that had followed from deliberate and collegiate choices.

But all that would not have been possible either, if we had not taken care that this decision to implement “le progrès continu,” a decision that was to have so many effects on the daily life of the Centre for five years, was really in line with a basic need of our school system. We had to make sure that what we were perceiving as a high priority for the Ministry of Education was not just a fantasy of ours, and then to make sure that what we were proposing to do in order to operationalize this policy was agreeable to the ministry. It took almost a year for a joint Ministry-INRS-Education committee to give straight and clear answers to these questions. Once the SAGE program had been approved in principle, we agreed with the Deputy Minister to put it under the supervision of a steering committee on which would sit a majority of civil servants and school board administrators. In so doing we were making sure that the Ministry and the milieu would be closely associated with the research team and kept informed at all stages of the program.

To plan adequately, in an institution that does not tolerate individualism and aims at solving some of the contemporary problems of the society to which it belongs, also requires that all instances concerned by the research enterprise be involved, in one way or another, in the planning process. Thus the defining of research programs at INRS-Education is not left to individual researchers but entrusted to the department or assembly of professors, which proceeds only after having consulted the Centre’s general assembly as well as a steering committee and a liaison committee comprising 7 members (out of 10) who do not belong to INRS-Education. Moreover, the research programs so defined must, to become operational, be approved by the Institute’s Board of Administration, that may take advice from the Academic Senate (Commission des études) and the Scientific Senate (Commission scientifique).

Finally, the third cause I see for the success of INRS-Education is the fact that it has institutionalized team work and set in place mechanisms that allow it to take advantage, quite regularly, of the feedback given by the milieu.

I will not elaborate on the point. I will only say that, in my opinion, the Centre’s history clearly demonstrates that most of the research projects that have not been pursued or that have not been carried through — excepting those projects that were blocked by some form of university lobbying — have been projects in which a researcher has isolated himself or herself from his or her colleagues and, often enough, by the same token, from the milieu with which he or she remained in contact only through research assistants.

## **Conclusion**

As a conclusion, I will confess that I would not hesitate — even knowing that it would provoke drama in the professional career of many individuals and would not permit the development of educational research in all of its conceivable directions — I would not hesitate to go again the way I have gone as

chairman of INRS-Education from 1972 to 1979; because I feel that it has been a successful road leading to significant contributions to the solving of contemporary educational problems in Québec.

These last seven years have been the best years of my life. For these unforgettable years, I thank my colleagues of INRS-Education and of our laboratory schools. I thank above all the learners who, without knowing it, have given me most.

## NOTES

This paper is adapted from an invited address delivered to the Canadian Society for the Study of Education in Saskatoon in June 1979.

1. AACTE, *Professional Teacher Education: A Programmed Design Developed by the AACTE Teacher Education and Media Project* (Washington, D.C.: American Association of Colleges for Teacher Education, July 1968).
2. Members of faculty at INRS are the only university faculty in Québec who are subjected to the rule of exclusivity of service. This means that by virtue of the work convention itself, the INRS professors waive the right of having any other professional honorarium than their salary, the scale of which is for them the same as for the other professors of the University of Québec and similar to the salary scales of the other, private, universities in the Province. That means that the money or profit involved in research contracts, negotiated and executed by faculty members, goes directly and in totality into the INRS bank account. In exchange for which each faculty member receives a yearly bonus of \$1,500. Unlike other university faculty, the professors at INRS cannot by renting their services or expertise ensure themselves substantial increments in revenue.
3. This means, in other words, that in order to be both productive and satisfied at INRS-Education, a researcher must be or become — and everyone knows that it is not common in Québec — a progressive-conservative!

## Résumé

*Aux yeux de l'homme de la rue, il n'y a pas de différence entre les gens qui travaillent dans une école et ceux qui sont au service d'une université. Dans la réalité, ceux qui travaillent dans une université pour le compte d'une école se heurtent à une antipathie violente de la part de bon nombre de leurs collègues et ce sentiment semble aussi inexorable qu'irrationnel. Dussault, qui dirige la section Education de l'Institut National de la Recherche Scientifique depuis sa création, est en mesure de parler de certaines tensions créées par ces universitaires qui trouvent le temps de faire de la politique et c'est avec véhémence qu'il exprime une réaction que trop de gens domptent sans broncher. Il décrit fièrement les réalisations de son institution qui emploie en recherches appliquées des procédures qui ne peuvent que déranger ceux qui jugent impure toute science qui n'est pas pure.*

