

# COFFE PLAN BLUEPRINT FOR 1970s

The report of the Commission on the Future of the Faculty of Education is "a pioneering attempt to bring a faculty at a Canadian university up-to-date," according to UBC's Dean of Education Neville Scarfe.

The dean made the remark at a news conference held to release the 125-page report of the COFFE group which was set up 16 months ago to make recommendations about the Faculty's future.

The eight-man Commission, chaired by Professor of Education George Tomkins, has handed down a 125-page report calling for a full-scale revision of the Faculty's academic and administrative structure. A summary of the report appears on Pages 2 and 3 of this edition of *UBC Reports*.

## PIONEERING ATTEMPT

Dean Scarfe said the COFFE report is awaited across Canada as evidence of an attempt to restructure and reconsider the whole business of teacher training in relation to the university and the schools.

"Our pioneering attempt is going to raise the level, aspirations and the quality of teachers going into the schools," Dean Scarfe added.

He emphasized that the report attempts to keep abreast of the needs of students, not only in the university but in the schools. The proposed revisions in administrative structure are designed to give students a say in the operations of the Faculty.

"I'm sure this report will be read very widely across Canada as one of the first attempts to

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reorganize a Faculty of Education to meet the needs of the 1970s. This is a 1970s type of report, not a 1960s one," the dean said.

Prof. Tomkins told the news conference that the Commission had been concerned to provide "a means whereby faculty can, in the future, be constantly responsive to change."

## DIRECT PARTICIPATION

He said there has been a great deal of talk in recent years of innovation within universities. He added that there has not been any provision for systematic evaluation of innovation.

"We hope the proposed structural reorganization will provide this," he said. The proposed reorganization would provide for direct faculty and student participation in the governance and determination of policy in the Faculty to a greater extent than in the past and than is the case in other UBC Faculties," Dr. Tomkins said.

## STUDENT COMMENT

John Rodenizer, president of the Education Undergraduate Society, said his initial reaction to the report was that it was "innovative and action-packed."

He said students hoped to have a hand in the implementation of the report. "We don't want to see it become a dust collector on a back shelf," Mr. Rodenizer said.



Photo by Extension Graphic Arts

DEAN NEVILLE SCARFE

# Universities Look to the Sea

A feasibility report asking for a badly-needed marine biological station at Bamfield on the west coast of Vancouver Island has been issued by the Western Canadian Universities Marine Biological Organization.

The National Research Council's marine sciences committee encouraged the University of Alberta, University of Calgary, University of Victoria, Simon Fraser University and the University of British Columbia about one year ago to press collectively for a west coast station.

## NON-PROFIT

The report contains recommendations of WCUMBO's steering committee "for consideration by the five parent universities, other government sponsoring bodies and interested individuals or organizations."

WCUMBO's legal status will be that of a non-profit educational society. UBC's Board of Governors has approved the establishment of such a society. Dr. N.J. Wilimovsky, professor of Animal Resource Ecology, and Deputy President W.M. Armstrong will be UBC representatives to implement the society.

This is the third example of inter-university co-operation in setting up scientific organizations in western Canada. UBC and Simon Fraser University and the Universities of Calgary and Victoria are involved in the TRIUMF Project which is building a cyclotron at UBC.

The Westar consortium to build an astronomical observatory with a 156-inch telescope on Mount Kobau in the interior of B.C. includes UBC and the Universities of Notre Dame, Victoria, Calgary, Lethbridge and Alberta.

The United States has 35 marine biological stations. The United Kingdom and France each have eight. Canada has four, none of which is in the west.

Western Canadian universities have had to rely on facilities made available by the University of Washington at its Friday Harbor Laboratories for undergraduate teaching and some research.

The feasibility report points to the irony that the first marine biological station in Canada was on the west coast. It was established at Port Renfrew by the University of Minnesota and operated between 1900 and 1908.

UBC established an Institute of Oceanography in 1949. A few years later a similar institute was set up by Dalhousie University in Nova Scotia.

Dalhousie and Memorial University, in Newfoundland, made separate proposals for marine biological stations to the National Research Council five years ago. NRC provided substantial financial support for both projects.

Memorial University opened a 23,000-square-foot laboratory at Logy Bay in 1967. Dalhousie's marine facilities will be incorporated into its new Biological Sciences Building now being constructed.

McGill University established an Institute of Marine Sciences recently through a private endowment. McGill has another marine biological facility—the Bellairs Institute—in Barbados.

Several eastern universities are forming an organization to operate the "Huntsman Marine Laboratory" at St. Andrews, New Brunswick.

## BROAD SPECTRUM

"The university scientists in eastern Canada now have a broad spectrum of facilities situated from the North Atlantic to the tropics," the report said.

"In addition, there is a long-term commitment by the universities of Quebec to establish a station in the estuary of the St. Lawrence. This will round out a group of excellent and biologically varied facilities for marine sciences in Eastern Canada."

Concern over lack of west coast facilities has grown in the past few years, the report said, "and a real urgency has developed with the creation of two new coastal universities in B.C." (Victoria and Simon Fraser.)

The report calls on the five universities to form a non-profit educational society for marine biological education and research, approve the plans for the Bamfield Station, and include the project in their funding programs.

The University of Victoria received permission from the British Columbia government to buy the 190-acre Bamfield site on behalf of WCUMBO last month. Canadian Overseas Telecommunications has accepted a bid of \$85,000 for the property. COT closed down the station in 1959.

## EXCELLENT SITE

Bamfield was selected over five other locations on the coast. The site has 1.8 miles of varied shoreline. It is in a protected inlet, has good anchorage and is accessible by public transportation. The fishing community can also provide services such as schools, shops and medical services.

For research purposes, Bamfield has an extremely rich and unique intertidal and subtidal biota and is close to fresh water habitats. It is free from pollution, and is adjacent to the West Coast National Park created by the provincial government last year which will minimize pollution in the future.

Half the foreseeable space needs for research and teaching can be supplied by the existing 9,000-square-foot building, said consulting engineers hired by WCUMBO. Conversion of the building, originally designed by Francis Rattenbury, the architect of the British Columbia Parliament Buildings and the Empress Hotel in Victoria, will require a single internal structural change. Only one of the inside partition walls will have to be removed.

# COFFE CALLS FOR TOP-TO-

A top-to-bottom revision of the administrative structure and academic program of the University of B.C.'s faculty of education has been recommended by a 7-member Commission established by Dean of Education Neville Scarfe.

The 125-page report of the Commission on the Future of the Faculty of Education will be the subject of intensive discussions within the faculty in coming months. Implementation of any or all of the 85 recommendations in the report will require approval by the dean and the staff of the faculty.

Most of the major recommendations affecting the academic program in education will also require approval by the UBC Senate and the Board of Governors.

Major recommendations call for:

—adoption of a single, five-year bachelor of education degree program;

—introduction of a "teaching associate" concept and abolition of the existing practise teaching method;

—changes and additions to the faculty's graduate programs calling for sharp differentiation between a doctor of education degree emphasizing practical studies and a doctor of philosophy program based on theoretical studies, and between a new master of pedagogy degree to be awarded without research and a research-oriented master of arts in education degree.

## COFFE Met 94 Times, Got 196 Submissions

The Commission on the Future of the Faculty of Education was set up early in 1968 to explore the general question of how the faculty of education should be organized to facilitate the study of education and the education of teachers.

In carrying out its task the commission consulted a very broad range of informed opinion within and outside the university.

During its deliberations it held 94 formal meetings, received 196 written and oral submissions from many individuals and groups, and established a total of 39 committees involving 131 faculty members and students.

The personnel of COFFE, all members of the faculty, plus one student representative were: Dr. G.S. Tomkins, professor, social studies education, and chairman; Professor Sam Black, professor, art education, and vice-chairman; Dr. L.B. Daniels, assistant professor, foundations; Dr. E.G. Fiedler, assistant professor, education psychology; Mr. D.C. Gillespie, assistant professor, science education; Dr. E.D. MacPherson, associate professor, mathematics education; Miss S.D. Nalevykin, assistant professor, physical education; and Robert Fisher, the student representative.

—implementation of a new administrative structure involving establishment of a high-level faculty council and, under it, a senior administrative board which together would be the main policy-making bodies in the faculty.

—appointment of an associate dean of development and planning to act as "an agent of change," and with the authority and resources to continuously evaluate the faculty's operations and propose and initiate change;

—student participation in decision-making at the operational level, and

—granting of separate faculty status to the school of physical education and recreation.

The introduction of a single, five-year bachelor of education degree program would replace the faculty's present two bachelor's degree programs—the four-year degree for elementary school teachers and the five-year degree for secondary school teachers.

COFFE's plan for a single, five-year degree program aims to abolish the administrative division

between the present undergraduate degree programs and eliminate distinctions of status and prestige.

In making its recommendation, the Commission notes that differences in salary and prestige have often been associated with the level at which one teaches. The report points to "the absurdity of investing the least resources at the level, viz., the early childhood years, that is now seen as crucial for learning. No longer can any teacher education program justify a differentiation in length, rigor or status based on the conventional levels of the school system."

## GLARING WEAKNESS

Requirements for the new B.Ed. degree would include time spent in a teaching associateship in a school district under the close supervision of a faculty member, for which the student associate would be paid. Student teachers' initial prolonged exposure to the classroom is an aspect of his experience in which faculties of education have often had little or no voice, the report notes.

COFFE says direct faculty supervision of student teaching associates while they perform their in-school training is "the best hope of countering any tendency of the neophyte to be overwhelmed by the conventional wisdom of the school system." The new concept would aim to "inhibit the process of socialization to the status quo" which the report calls the most "glaring weakness" of the present apprentice-like student teaching program.

In its recommendations on the faculty's graduate programs, the Commission proposes reorientation at both the master and the doctorate degree levels.

At the doctorate level, the Commission recommends that the faculty offer a doctorate of education and a Ph.D. The Doctorate in Education would be an applied research type of degree and the Ph.D. would be a theoretical, research-oriented degree.

Similarly, at the master's level, the Commission would replace the present master of education degree with a new, non-research-oriented master of pedagogy degree, while retaining and strengthening the present master of arts in education as a research-oriented program.

In this way COFFE suggests the faculty can solve the conflict between the need to provide continuing education for its professional constituency and the need for the faculty to strengthen its research efforts, which COFFE emphasizes should be a major concern of the faculty over the next decade.

In its recommendations on the structure and government of the faculty, COFFE recognizes that a major need of the faculty is to constantly assess its own work and be capable of responding creatively to the challenges posed by external change.

To meet this need, the report recommends the appointment of an associate dean of development and planning. The report envisages his role as encouraging and initiating "innovative and experimental programs so that the planning and initiation of deliberate change will receive high priority within the faculty."

The final chapter of the COFFE report contains the Commission's recommendations regarding implementation of its proposals. It suggests immediate implementation of the proposed administrative reorganization and gradual implementation of other proposals over the next five years.

## EVALUATE TEACHING

COFFE's chapter on internal relations in the faculty recommends that more systematic emphasis be given to successful teaching as a criterion for promotion and tenure and proposes a commitment-unit system as a criterion for allotting faculty member's teaching, committee work and other responsibilities.

The report says that a faculty member should be able to devote the major part of his time and effort to his teaching duties without jeopardizing his chances for promotion and tenure. The report recommends investigation of the feasibility of developing criteria for evaluating teaching as a basis for salaries, promotion and tenure.

# TOP-TO-

Tackling the thorny question of faculty workloads, COFFE rejects the traditional "classroom contact-hours" measurement and suggests instead the use of "commitment-units" with unit values being assigned to such things as teaching duties, administrative responsibilities and supervision of graduate studies and research.

In the section on external relations of the faculty COFFE calls for continued, close cooperation between other faculties and the Faculty of Education, noting that implementation of the five-year bachelor of education program requiring two years of pre-education work, gives other faculties responsibility for a considerable part of the general education of the prospective teacher.

COFFE also notes that increasing numbers of graduates of other faculties take teacher training through the faculty of education. In the future, such students would be enrolled in the master of pedagogy program. Upon completion of 36 units beyond a B.A. (including credit for the teaching associateship), students would qualify for the M.Ped. degree.

Regarding the faculty's commitment to continuing teacher education, COFFE recommends that every effort be made to improve the quality of the extensive and comprehensive continuing education programs offered by the faculty and the extension department of UBC.

Specific proposals are made for strengthening relations with various external groups concerned with teacher education, such as the B.C. Department of Education, the B.C. School Trustees' Association and the B.C. Teachers' Federation.

The following gives more details of the proposed teacher education program, graduate programs and the plan for the structure and government of the faculty.

TEACHER EDUCATION PROGRAM: COFFE details four routes to completion of the proposed five-year bachelor of education program, which would replace the existing four-year program for elementary teachers and the five-year program for secondary teachers.

## FIRST DEGREE ROUTE

The proposed five-year program calls for a minimum of two years of pre-education work at any recognized post-secondary institution, with the remaining years of study pursued under the guidance of the education faculty.

The first route to a B.Ed. degree consists of two years of pre-education work at any recognized post-secondary institution, followed by three years of study in the Faculty. The second route permits transfer to the faculty of education after three years in another faculty.

Those already holding degrees from other faculties or from other universities will have a choice between

## Students Took

Students have neither the experience nor the background to function effectively on high level administrative committees of the faculty of education, according to the Student Committee on the Future of the Faculty of Education (SCOFFE).

As a result of experiences with the COFFE group established by Dean Neville Scarfe in the spring of 1968, the SCOFFE group says "we do not recommend that students sit on high level administrative committees."

The student experience on COFFE committees is recorded in a set of introductory remarks included in the published report of the commission.

The SCOFFE group says it had "ample opportunity to express our opinions" to the faculty commission and the success of these frank discussions "indicates the feasibility of future student-faculty collaboration."

Students were involved in the committee work of COFFE and early in 1969 a representative of

# BOTTOM CHANGE

two additional routes. Route three requires two years of full-time residence on the campus and makes it possible for the student to complete the master of pedagogy degree before beginning full-time teaching.

Route four provides a graduate of another faculty with the opportunity to take a full year teaching associateship and as in route 3, permits him to proceed toward the M.Ped. degree.

## SPECIAL PROGRAMS

COFFE's plan permits students in any route to a degree to elect any one of thirty or more programs, each concerned with a specialty. In calling for a greater emphasis on specialties in teacher education, the report specifically rejects conventional training for elementary teaching based on the illusion of graduates having been "trained" to teach eight to ten subjects.

The report also recognizes the continuing need for less specialized teachers at the elementary school level, and recommends four broad specialties at this level: Childhood Education (Academic), Early Childhood Education (Expressive Arts), Later Childhood Education (Academic), and Later Childhood Education (Expressive Arts).

Suggested specialty programs include: art, English, music, mathematics, science, social studies, second language, physical education, reading, industrial education, dance, rhetoric and educational drama, biology, chemistry, physics, earth science, agriculture, economics, geography, history, guidance, commerce, school librarianship, Indian education and communications and media.

Following two years of pre-education training the student will enter the faculty of education for three further years of study called Education 1, 2 and 3. Here are the main components of each year.

**EDUCATION 1** — Term 1. Education 301 — a series of short-course, intensive laboratory-type experiences centered on such topics as "general awareness", "categories of learners", "teaching of a discipline", or "teaching strategies" for the first seven weeks. For the remaining seven weeks the student would be assigned to a seminar group in his chosen specialty where he would begin a practical and theoretical study of the teaching problems associated with that specialty.

**Term 2** — Education 302 — a seminar built around the selected specialty with related practical experience.

**EDUCATION 2** — Term 1. Education 401 — a teaching associateship available in either term of Education 2. The associateship is a period of residence in a school district under the close supervision of a member or members of the faculty, during which the student practices the knowledge and skills acquired in the preceding year. A classroom or field research project will be conducted as an integral part of the associate's school assignment.

**Term 2** — Education 402 — a seminar conducted as a follow-up to the associateship.

**EDUCATION 3** — Terms 1 and 2. Education 403 — education theory.

The Teacher Education Plan has two further components which will be taken concomitantly with Education 302, 402 and 403. They are:

1. A further specialty component made up of academic and/or professional courses or other activities related to the specialty. This component will permit students preparing to teach a given subject to take a major in an academic department.

2. An elective component in which the student may extend his general education or his specialty or otherwise improve his teaching competence by doing academic or professional work outside his specialty.

In addition to the minimum pre-education requirement of two years for all students, COFFE proposes that all future applications to the faculty be submitted not later than March 1 of each year. It also recommends that every applicant for admission be interviewed.

Dealing with the difficult question of the suitability of candidates for admission to the faculty in terms of such qualities as personality, stability, and sensitivity, COFFE suggests that the use of non-academic criteria for admission raises as many problems as it solves.

Stressing that the faculty should seek to provide a variety of opportunities at many points through the teacher education sequence at which students can be helped to assess their suitability for teaching, COFFE suggests dealing with cases of extreme unsuitability by establishment of a committee to deal with personality problems. It would be empowered to require remediation of the problem or to deny admission to or continuation in the faculty. Referral to the committee could be made at the time of interview, at registration or when problems become apparent.

**GRADUATE PROGRAMS:** The Faculty of Education has been authorized to offer the doctor of education degree since 1962. The degree, however, has been forced to serve both practice-oriented functions and those of a research type, the report says.

COFFE's recommendation is that the faculty offer two distinct doctorate degrees—the doctor of education and the Ph.D.—the first to be non-research-oriented and the second to be theory-oriented.

The report bases its recommendations on the premise that "there is such a thing as a practising educator and there are educational phenomena about which we need to know a great deal." The *status* of these degrees, the report points out, must be equal. Any difference between them should be with respect to *function*.

## GRADUATE STUDIES

Dealing with graduate programs at the master's level, the report concludes that the present master of education degree is unsuitable and recommends two distinct degrees—a new master of pedagogy (M.Ped.) degree and a master of arts in education degree.

The master of pedagogy would not be a research degree and is intended to meet the demand for supplementary training for graduates of other faculties or universities and for teachers and other practising school personnel who want to increase their competency and receive recognition for their efforts.

The strengthened master of arts degree would permit restricted numbers of students to pursue advanced studies and research.

In other recommendations on graduate programs, COFFE states its belief that the faculty of education should not become involved in the training of paraprofessionals such as teachers' aides, but does recommend that the faculty consider establishing a graduate program to prepare instructors of such personnel.

With regard to graduate diploma programs, the report recommends that a single graduate diploma in education (G.D.E.) be offered and that the courses taken for this diploma be applicable toward an M.Ped. degree. It recommends that existing diploma

programs be fully integrated with the five-year bachelor of education teacher-education programs.

**PROPOSED STRUCTURE AND GOVERNMENT:** In its proposals regarding faculty structure and government COFFE attempts to provide administrative structures that permit both coherence and adaptability, based on a system of government incorporating democratic notions of advice and consent.

COFFE outlines the following principles as desirable for incorporation into the future structure of the faculty: provision for a person with strong administrative powers and responsibilities to act as a change agent; mechanisms for deliberating and formulating policies and programs; clearly defined channels for participation by faculty and students in the affairs of the faculty; a means for the systematic collection of information; channels for decision-making that encourage the making of decisions at the lowest possible level and a structure which maintains constant pressure for change.

In COFFE's detailed plan for reorganization the ultimate legal body of the faculty is a proposed Faculty Council, consisting of all individuals of faculty rank. Among its functions and powers, outlined in detail in the report, are the dissolution or establishment of all standing or ad hoc committees; the alteration of the structure and organization of the faculty; deciding on all matters under its jurisdiction which must be referred to Senate and other external bodies and the election of faculty members to standing committees.

## POLICY BODY

Under the Faculty Council is a proposed Senior Administrative Board, (SAB), consisting of the dean of education, four associate deans and four elected members of the Faculty Council. Its functions include ruling on all major matters of policy referred to it by the dean, associate deans, committees and departments; assignment of policy-making, advising committees under its jurisdiction; supervising the overall growth and development of the faculty; holding semi-annual public meetings and distributing faculty teaching and other commitments.

The four associate deans will be responsible for development and planning, graduate programs, teacher education programs and services.

Chaired by the associate dean of graduate programs and the associate dean of teacher education programs, respectively, and reporting to the Senior Administrative Board will be an executive committee on teacher education programs and an executive committee on graduate programs.

Also proposed are four standing committees directly under the senior administrative board on continuing teacher education; faculty personnel policies; environment resources and student-faculty liaison.

Each will have such general policy-making, advisory and deliberative powers as the SAB may assign and will, like the SAB itself, hold semi-annual public meetings. The composition of the SAB committees and the functions and powers suggested for each one are outlined in detail in the report. In addition, ad hoc committees will be established by the associate dean of development and planning to oversee a given experimental project.

The COFFE report retains, with some modifications and additions, the existing departmental structure of the faculty, concluding that given the large size of the faculty and the present stage of its development the existing system is most suitable. Three new departments which the report indicates should be established are departments of cross-cultural education, early childhood education and teaching strategies.

To carry out routine administration of the faculty and to free the dean, SAB members, and others for policy-making duties, COFFE recommends the establishment of a set of offices under the supervision of the associate dean of services. These would deal with teacher education programs, graduate programs, curriculum and media services, and internal and external services.

A final problem dealt with by COFFE in its plan for the structure and government of the faculty concerns the role of the school of physical education and recreation. Members of the commission believe that the size, operation, prestige and future plans of the school merit its existence as a separate faculty. All potential teachers of physical education should continue to be recommended for certification by the faculty of education, the report adds.

## Part in COFFE

the student commission was added to the COFFE group as a fully participating member.

The student commission says its reasons for not recommending that students sit on high level committees are "purely practical."

In addition to lacking experience and background knowledge, "it would be a rare student indeed who could meet the demands of such work, and at the same time sustain a university workload."

The student remarks continue: "With these thoughts in mind, Chapter Two of the COFFE report proposes in the future, students be invited to participate in those committees which are immediately related to their university life and to which they can contribute most."

Chapter Five of the commission's report also endorses in principle the concept that "students should be involved in a consultative and sometimes representative way in decision-making about matters which are of concern to them."



Photo by Extension Graphic Arts

GETTING A RISE out of a recent bread sculpture exhibition in the Frederic Lasserre Building are student Sherry McKay, left, and Henry Gilbert, assistant professor of fine arts. Bread sculptures, done by fine arts students, made their appearance at one of a series of

Thursday afternoon happenings in the Lasserre Building staged by students in architecture, community planning and fine arts. Students and faculty are welcome to attend the weekly events. Harvest loaf shown above was eaten by participants in the happening.

## Education Week Set

The need for an integrated concept of education will be the theme of Education Week at the University of B.C. Nov. 17-21.

An informal student committee in the faculty of education has arranged the week's events, which include a day-long teach-in Nov. 17, a series of free-wheeling seminars in the lounge of the education building and panel discussions on such topics as education for Indians at UBC and the future of education in the province.

Organizers of the week hope that the entire University community will participate in the seminars and attend the panel discussions. "Our objective," said one of the organizers, "is to stimulate discussion on the campus and in the community on the need for an integrated concept of education."

Here is a list of Education Week events:

### MONDAY, NOV. 17

ALL DAY—Teach-in in the faculty of education. Decision on whether or not to cancel lectures will be voted on by each class.

9:30 a.m.—Seminars begin in the lounge of the Education Building. These are free-wheeling discussions presided over by a leader. Interested persons may join the informal meetings to listen and ask questions. First seminar will be conducted at 9:30 a.m. by Dean of Education Neville Scarfe on the subject "Problems in Education." Other seminars begin as follows: 10:30 a.m.—"Educating the Community?" AMS Community Information Committee—David Zirnhelt, Susan Shaw and Mike Doyle—will relate the community experience of the committee to the faculty. 11:30 a.m.—Dr. Bill Willmott, department of anthropology and sociology—"Alternatives to the Faculty of Education." 12:30 p.m.—Dr. Louis Feldhammer,

Simon Fraser University, "The Irrelevancy of Education." 1:30 p.m.—Dr. C.W. Truax, faculty of education—"Student Teaching—Is It Worth the Trouble?" 2:30 p.m.—Robin Harger, department of zoology—"The Environment and Education." 2:30 p.m.—Dick Betts, president, Arts Undergraduate Society—"Integrative Alternatives to Fragmentation in Education." 3:30 p.m.—Panel discussion on "Indian Education" by Indian students at UBC.

### TUESDAY, NOV. 18

12:30 p.m.—Panel discussion in Education 100 on "The Future of Education in B.C." Panelists are student leaders John Rodenizer, Education Undergraduate Society; Fraser Hodge, president, AMS; Norman Wickstrom, student president at SFU, and Bob Hicke, of the B.C. Union of Students.

### WEDNESDAY, NOV. 19

12:30 p.m.—Vancouver psychiatrist Dr. Bennett Wong speaks in Education 100 on "A Psychiatrist's View of Education."

### THURSDAY, NOV. 20

12:30 p.m.—Panel discussion on "Politics and Education" in room 100 of the education building. Panelists are the Hon. Donald Brothers, minister of education for B.C.; Mrs. Eileen Dailly, NDP member in the B.C. legislature and Mr. David Brousson, Liberal member of the legislature and a UBC Senator.

### FRIDAY, NOV. 21

12:30 p.m.—Open assembly in room 100 of the education building. Speakers are: Dr. Stuart Martin, director of elementary instruction for the Vancouver School Board, and Alfred Clinton, director of secondary education, VSB.

# Pollution Expert Appointed

Dr. Frank E. Murray, a leading Canadian expert on devices for controlling air pollution from pulp and paper mills, has been named head of the University of B.C.'s department of chemical engineering.

Dr. Murray, 50, joined the UBC faculty in 1968 after serving as a research officer and head of the applied chemistry division of B.C. Research, located on the UBC campus.

He has been acting head of the chemical engineering department since May of this year following the resignation of Dr. James Forsyth, who continues to hold the rank of professor in the department.

At B.C. Research Dr. Murray was involved in process and engineering development with major emphasis on air pollution resulting from the pulp and paper industry.

Devices developed by Dr. Murray's research group at B.C. Research are now in wide use throughout the world to control air pollution from pulp and paper mills.

Dr. Murray said he plans to expand work now underway in the UBC chemical engineering department on air pollution control technology related to pulp mills.

"We hope to get involved in other air pollution problems," he added.

Dr. Murray is a native of Grande Prairie, Alberta, and is a graduate of the University of Alberta, where he received his bachelor of science degree in 1950. He received his doctor of philosophy degree from McGill University in 1953 and is a registered professional engineer in B.C.

Dr. Murray has had previous experience as a university teacher and was research coordinator for the Consolidated Paper Co. He is a member of several professional groups concerned with the pulp and paper industry and air pollution control. He has a lengthy list of publications concerned with air pollution control.



DR. FRANK E. MURRAY

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