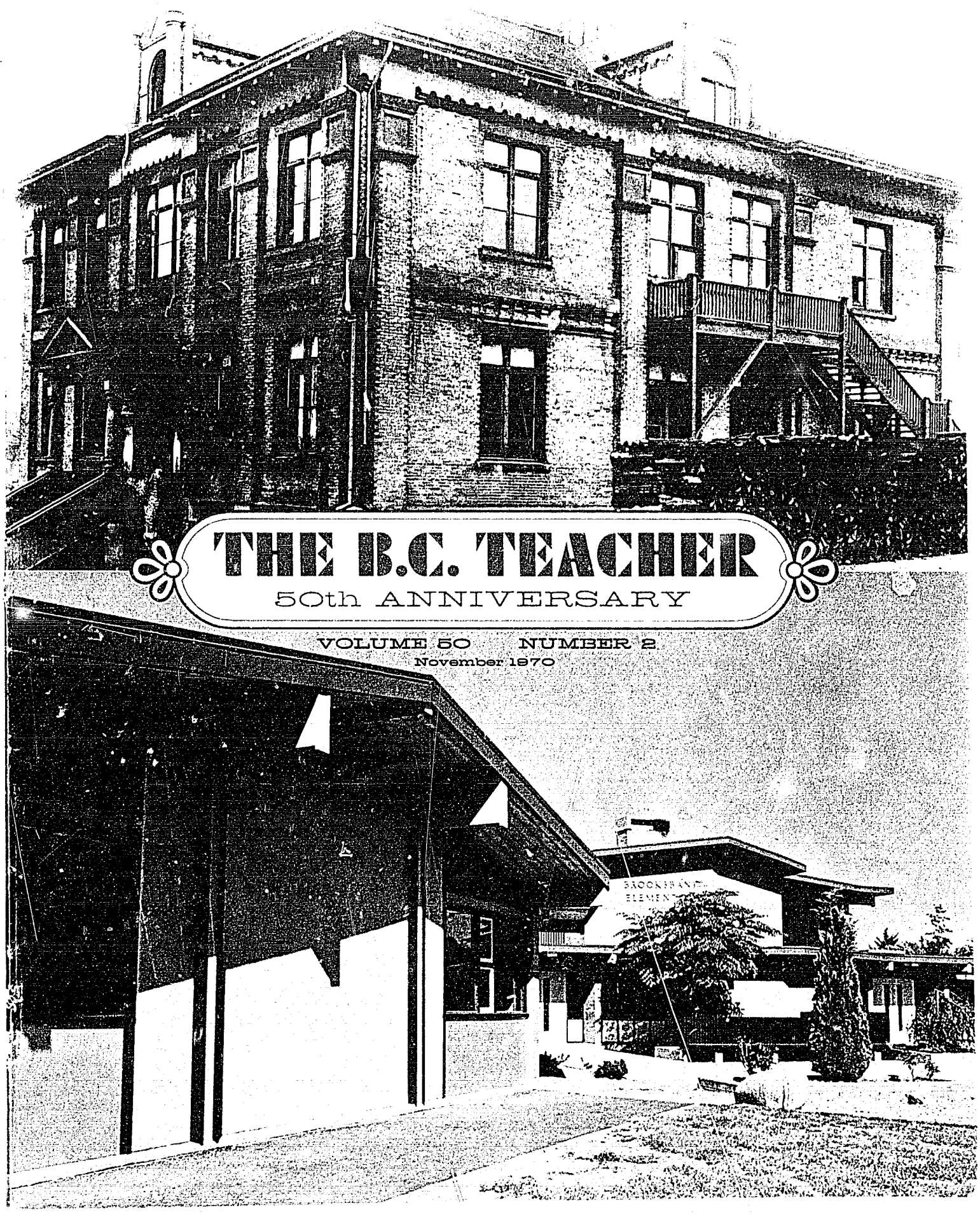

THE B.C. TEACHER

50th ANNIVERSARY

VOLUME 50 NUMBER 2

November 1970

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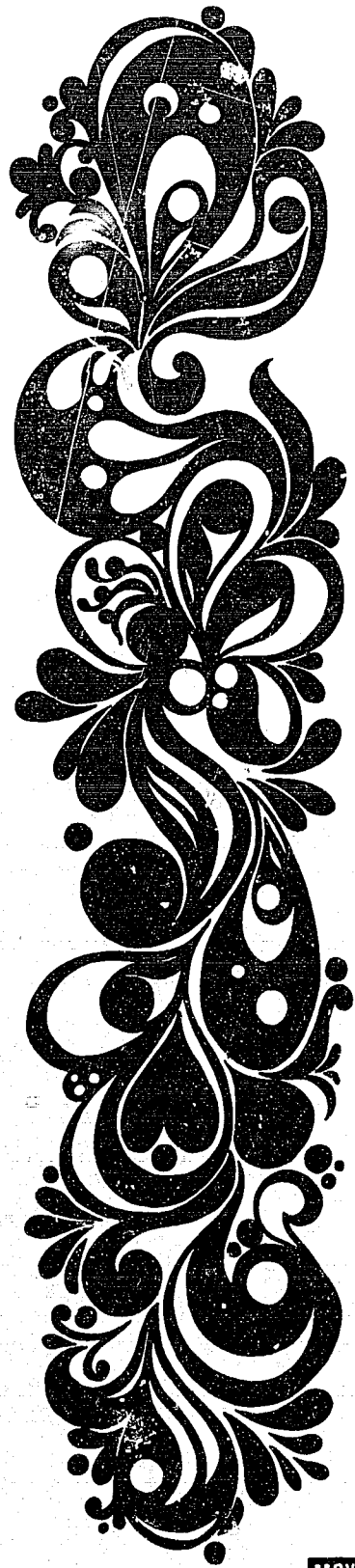

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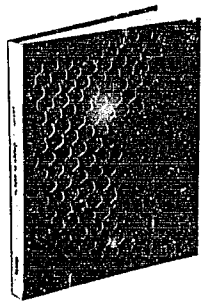

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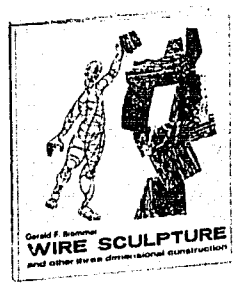

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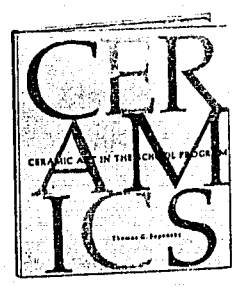

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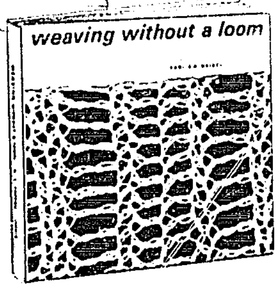

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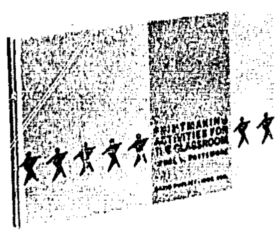

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2	240.00	14.69	19.68	259.68
3	360.00	25.10	44.78	404.78
4	480.00	36.38	81.16	561.16
5	600.00	48.48	129.64	729.64
6	720.00	61.54	191.18	911.18
7	840.00	75.60	266.78	1,106.78
8	960.00	90.79	357.57	1,317.57
9	1,080.00	107.11	464.68	1,544.68
10	1,200.00	124.71	589.39	1,789.39
11	1,320.00	143.66	733.05	2,053.05
12	1,440.00	164.11	897.16	2,337.16
13	1,560.00	186.12	1,083.28	2,643.28
14	1,680.00	209.83	1,293.11	2,973.11
15	1,800.00	235.39	1,528.50	3,328.50
16	1,920.00	262.94	1,791.44	3,711.44
17	2,040.00	292.62	2,084.06	4,124.06
18	2,160.00	324.61	2,408.67	4,568.67
19	2,280.00	359.04	2,767.71	5,047.71
20	2,400.00	396.18	3,163.89	5,563.89

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End of Year	Yearly Interest Earned	Total Earned Interest Accumulated	Average Annual Return	Total Investment Including Interest
			INITIAL INVESTMENT —	$ 1,000.00
1	$ 77.50	$ 77.50	7.75%	$ 1,077.50
2	83.50	161.00	8.05%	1,161.00
3	89.97	250.97	8.36%	1,250.97
4	96.95	347.92	8.69%	1,347.92
5	104.46	452.38	9.04%	1,452.38
6	112.55	564.93	9.41%	1,564.93
7	121.28	686.21	9.80%	1,686.21
8	130.68	816.89	10.21%	1,816.89
9	140.80	957.69	10.64%	1,957.69
10	151.72	1,109.41	11.09%	2,109.41
11	163.47	1,272.88	11.57%	2,272.88
12	176.14	1,449.02	12.07%	2,449.02
13	189.79	1,638.81	12.60%	2,638.81
14	204.50	1,843.31	13.18%	2,843.31
15	220.35	2,063.66	13.75%	3,063.66
16	237.43	2,301.09	14.36%	3,301.09
17	255.83	2,556.92	15.04%	3,556.92
18	275.66	2,832.58	15.73%	3,832.58
19	297.02	3,129.60	16.47%	4,129.60
20	320.04	3,449.64	17.24%	4,449.64

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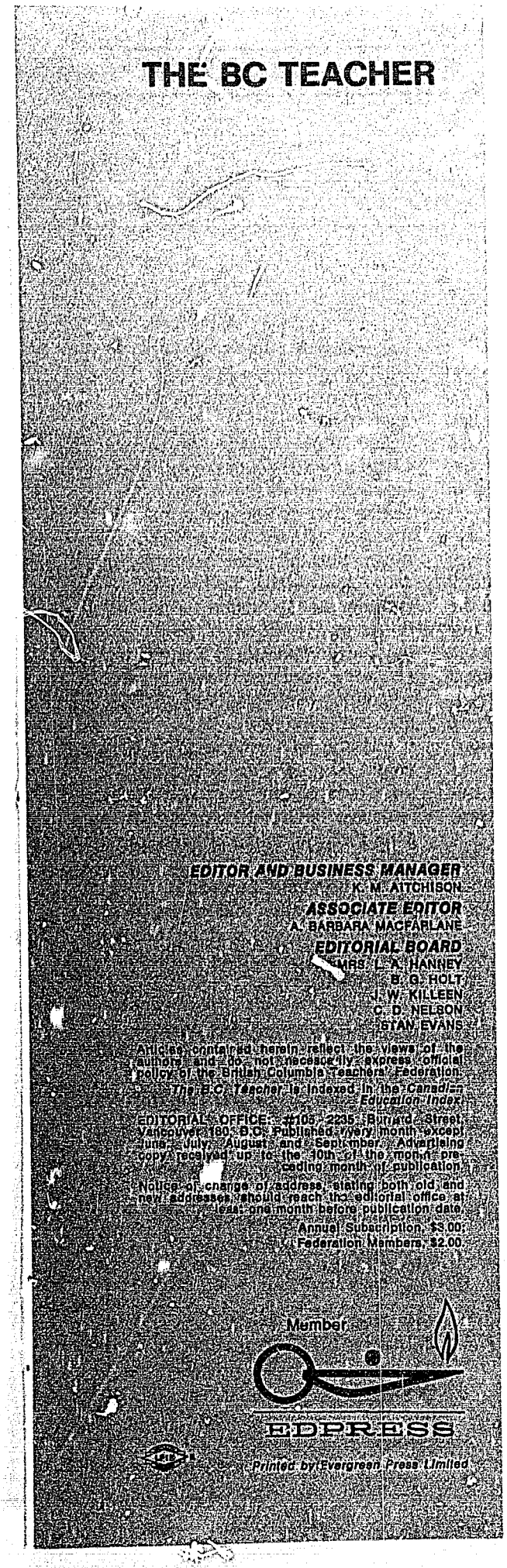

THE BC TEACHER

PUBLISHED BY THE BRITISH COLUMBIA TEACHERS' FEDERATION
Affiliated with the Canadian Teachers' Federation

Vol. 50, No. 2 **November 1970**

COVER PICTURE

This month's cover shows the change in school architecture that has come over the years. The picture of Vancouver's Central School (now on its site is the Vancouver Vocational Institute) comes from the Vancouver School Board archives. The picture below of North Vancouver's Brooksbank Elementary School was taken by Dave Looy.

PHOTO CREDITS

*Pp. 52, 65, 77—Bob Bodlak; p. 53—Dave Looy; pp. 55, 56, 57, 58—supplied by author; pp. 62, 75—Divn. of Visual Education, Department of Education; p. 64—BCTF; p. 72—*Teach Me!, *National Education Association; p. 86—National Film Board.*

Economics Course Needed

Sir,

What is the pedigree of inflation before the introduction of paper currency? Obviously the practice of debasing the coinage, a practice that historians have universally condemned as a social evil, a stealing from the whole community, whether it was indulged in by Nero, Henry VIII or lesser counterfeiters.

Today, while Dr. John Young, chairman of the Prices and Incomes Commission, aims not at eliminating inflation, but at reducing it to 'about 2%,' no political party in Canada (or elsewhere), though responsible under the BNA Act for provincial education, has, as yet, advocated the introduction into the secondary school curriculum of a course on paper currency and bank credit.

In his recent report on industrial unrest in B.C., with all too uncommon insight, Mr. Justice Nathan Nemetz writes, 'It is not their (management's and labor's) fault that inflation and recession co-exist in 1970,' i.e., inflation produces industrial unrest, not *vice versa*.

Vancouver Arthur V. McNeill

Your Grade 1 Is Showing Again, Mum!

Sir,

I did it again last night. I was telling my 18-year-old daughter an amusing anecdote I had read about a beagle. We laughed together, then I added, 'A beagle is a type of dog.'

The familiar, pained expression crossed her face. 'Mother-r-r, your Grade 1 is showing.'

I bit my tongue. Why couldn't I remember, I asked myself. It had been a long, long time since I'd slipped. At least two weeks. I was even beginning to think that I had the thing licked. After all, it has been eight years since I stood in front of a Grade 1 class.

But, let's face it, we primary teachers are a breed apart. A superior breed, undoubtedly, or we shouldn't have chosen the primary field in the first place. Still, we do have our peculiarities. There's more than a little truth in the remark, 'Once a primary teacher, always one.'

We beam. Now there's nothing wrong with beaming, but apparently some big people—oops, I mean adults—don't appreciate being beamed upon as if they were 6-year-olds.

It's our speech, however, that most betrays us. We do have a tendency to forget that we're not always talking to young children.

Not long ago my son said to me, with a grin, 'Your Grade 1 is showing, Mum. I'm a big boy now, you know.' I tell you, I'm beginning to feel like the family joke. With our son and daughter both attending university, and a husband whose life motto has been, 'Never use a small word where a big one will do,' you can readily see that the odds are against me.

Sometimes, 'just to show them,' I haul down a volume of our Encyclopaedia Britannica, and sit there poring over its pages in a most impressive manner for an hour or more. But this ruse backfires because I invariably find myself becoming so fascinated with such things as cyprinodonts, damascening and combinatorial analysis that I begin to wonder if I haven't missed something by staying with the 'cat, mat, rat' syndrome.

Just the same, although I have taught all grades up to and including Grade 10, my heart will always remain with Grade 1. For me, there is no thrill quite like walking into a room full of little people at school for the first time. Dressed in sparkling new clothes and shoes, eyes shining, eagerness and an excited awe in their faces, they sit ready to adore teacher.

I can hardly wait until my grandchildren arrive, so that once again I'll have someone who can converse with me on my own level.

Wellington Mrs. Lillian Hunter

We Shall Miss These Teachers

Active Teachers	Last Taught In	Died
Arie Bakker	Vancouver	August 6
Mrs. Grace V. (Forrest) Bowles	Surrey	January 9
Robert Leslie Pharis	Maple Ridge (and SFU)	March 27
Retired Teachers	**Last Taught In**	**Died**
Miss Jessie M. McKenzie	Burnaby	September 26
William Y. McLeish	Vancouver	September 15
William H. Mitchell	Burnaby	September 25
Mrs. Edith Ratchie	Burnaby	August 21
Daniel J. N. Stewart	Surrey	September 12

the knowledge gap

...e education pendulum continues to swi g from one extreme to the other. The BCTF's General Secretary argues that the reason for the swing is that there is no educational theory to guide educational practice, that although they are genuinely concerned about children, teachers don't know how to nurture human growth and development. He suggests that Dr. Marc Belth, in his recently published book, The New World of Education, has provided an outline of the theory that is so badly needed.

This article has been adapted from one the writer prepared for the Spring 1970 issue of Teacher Education, published by the College of Education, University of Toronto.

C. D. OVANS

¶There are signs that education at the present time is making another pendulum swing—away from progressivism to traditionalism. The 'freedom with responsibility' slogan no longer attracts a ready following and more and more of those who never did accept it are now openly attacking it.

'Education seems to have an ingrained disposition toward dogmatism of the extreme left or right,' Dr. J. M. Paton of the Ontario College of Education has observed. In his view the educational pendulum typically swings between either/or theoretical positions.

I argue that 'the ingrained disposition of education toward dogmatism' which disturbs Dr. Paton has developed because educators try to operate without benefit of theory at all. The so-called gap in education between theory and practice does not exist. A non-existing theory and a real practice leave no gap.

What pass for theory in education are high level abstractions, drawn largely from the fields of psychology, sociology and anthropology. These disciplines can and do enlighten the education problem, but they provide no effective guide to educational practice. 'Science enlightens but man decides.'[1]

What the teacher as a professional person requires is a rational basis for decision-making so that he can profit from the light shed by knowledge made available to him from any source.

'There is nothing so practical as theory,' said Bacon. He might have added, 'except when it's what passes for educational theory.' This is where the real gap is—between so-called educational theory and the kind of theoretical knowledge needed by teachers to guide their practice. In this sense it is a knowledge gap.

Thinking plus Action equals Solution.[2] But if we try to make this equation apply to finding solutions to educational problems we come up against the gap represented by the lack of theoretical thinking that could be called educational thinking. Psychological thinking, sociological thinking, anthropological thinking *about* education—yes. 'Educational' thinking—no.

A group of people met earlier this year to consider ways and means of providing effectively for Indian pupils in integrated schools. They talked seriously for hours about political, psychological and cultural aspects of the problem, but seemed to be unconsciously trying to avoid coming to grips with the educational aspects.

Education is *human* growth and development. Indian children are human. The real problem is that teachers do not know effectively how to nurture human growth and development. Answers to that problem are not to be found within political science, psychology or anthropology. What is needed is thinking that is specifically educational, thinking that is related to the process of nurturing human growth and development, aided by insights drawn from other disciplines.

In trying to promote the intellectual growth and development of their pupils without the direction of theory, without proper measures, teachers have been, like bush pilots, 'flying by the seat of their pants.' The wonder is that they have achieved as much success as they have.

In the process they have become action-oriented, convinced they can find their way on a trial-and-error basis. Who misses what he never had? Many have become insecure. It's a very uneasy feeling, not knowing exactly how to get to where you want to go.

This is why fads catch on so easily and quickly. One way doesn't work, so try another. Change becomes the order of the day. Novelty keeps life interesting. Through experiment one discovers what does or does not work. One goes to a conference or makes a 'visitation' to find out what others are doing.

Why the pendulum swings? Teachers, by and large, are genuinely concerned about children. They readily accept the ideal that every child should be treated as an individual—developed to the limits of his potential. The teaching world is full of good intentions. Everyone is desperately seeking a cure for readily observable educational ills. The 'old' ways that produced these ills must go and be replaced by the 'new.'

But, alas, there is no real appreciation of the complexity and difficulty of the task of nurturing human development, especially in a mass education system. Programs based on good intentions and noble purposes come to produce disorder and confusion. The idealists, once their bubble bursts, are secretly glad to join the ranks of the traditionalists and help confirm the op-

[1] Lancelot Law Whyte, *Accent on Form.* (New York: Harper and Brothers, 1954)

[2] The formula was derived from an article in *UBC Reports*, Vol. 14, No. 6, October 1968, by Professor Gerald McGuigan, who was commenting upon the growing rift between liberal academics and radical students. He said, '"liberal" theories of change and paradigms of action can lead only to "liberal" solutions.'

Dr. Belth (lower right) conducted a short course for B.C. teachers on his philosophy of education in the summer of 1968.

posing pendulum swing. Everyone goes back to 'keeping school.'[3] When there is no guidance and direction from theory, pendulum swings are bound to occur.

This is not to blame teachers. The institutions that prepared them gave them no 'action'[4] theory but high level abstractions, not dynamic concepts rooted in understanding but static concepts, useful only for passing examinations in education courses.

But this is not to blame professors of education either. Blamemanship leads nowhere. Professors, like teachers, are people—and people do the best they can with the knowledge they have in the context within which they have to operate.

At the theoretical level we simply don't have professors of 'education.' We have professors of sociology, psychology, philosophy or anthropology teaching in faculties of education. They can and do illuminate the forces which restrain or facilitate the educational process—the process through which brain-power is developed, through which man's capacity to think is nurtured, through which man becomes self-reliant and self-governing in every aspect of living. But they do not deal with the process itself.

I have become convinced that the educational process—or intellectual development process—is essentially a structuring process through which man sorts things out, creates order out of disorder, or sense out of nonsense. The well educated man is a person who can intelligently sort many things out—his movements, his feelings, his values, his beliefs, his social relationships.

The organ for sorting things out is the brain. 'As the hand is the tool of tools, so the brain is the structure of structures,' said Aristotle. The mind, the functioning brain, structures itself as the structure of structures through confrontation with the unknown. Our knowledge is a product of two forces, our sensory experience of the world and the creative imagination of the human mind. How to activate these forces, how to channel and direct them so that the learner acquires knowledge as power, is surely the proper field of study of education as discipline.

The notion that the educational or mental development process is essentially structural seems to be supported by the research of Dr. Wilder Penfield into the functions of the brain. He writes:

'It has become evident that in the brain of a small child a frame of reference is *set up* for language learning. When a second language is presented, the language fails *to fit* the first *frame* and a second frame is set up. . . . The secret of (the) greater capacity of the bilingual brain to learn a third language appears to be what might be called a "switch mechanism," a conditioned reflex whereby the brain unconsciously switches to the appropriate frame for the language being presented. The earlier this switch mechanism for language is implanted in the brain the more easily it will operate in later life, because it is only in the young that a perfect language frame can be set up. Going on from this, it is my firm opinion (and I have some evidence to support me) that the brain of a bilingual person is better than it would have been had he been unilingual; and I mean better *in a general sense*, not simply a verbal one, although this of course is hard to demonstrate.'[5] (Italics mine.)

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[3]For a devastating condemnation of 'keeping school,' by viewing schools as anti-educational institutions, read Ivan Illich, 'Commencement at the University of Puerto Rico,' *The New York Review of Books*, Vol. XIII, No. 6, October 9, 1969.

[4]'Art, science, religion and philosophy in the European tradition are systems of knowledge (how we "apprehend" the world); in the American they are systems of action (how we "act" in the world).' Hugh Duncan, in *Symbols and Society*. (New York: Oxford Press, 1968)

[5]Wilder Penfield, 'An Anatomy of Language Learning,' Ontario Institute for Studies in Education: *Orbit*, October 1969)

Call a 'frame' a 'structure' and the setting up of a frame 'structuring,' and the relevance of my concept becomes clear. Go beyond this, accept that the development of a second language frame increases brain capacity, and along with this acceptance the conclusion that what is true for the particular kind of structuring that is language development is likely true for all kinds of structuring.

This leads us directly into Marc Belth's argument that education is a discipline with its own distinctively organized structures, which he chooses to call 'models.' Dr. Belth is a professor of educational philosophy at Queen's College, City University of New York. He contends that education is the nurturing of the capacity to think. Thinking is a sorting-out process. Education models are based upon analysis of the thinking process, the process through which the human brain conceptualizes, developing its capacity as it structures.

Teaching becomes the process through which the learner is helped to acquire the capacity to use models, the different structures within subject matter—models of history, models of mathematics, models of art, etc. The more models (structures, frames) are developed in the brain, the more general brain-power is developed. The teacher follows methodological models (structures of structure) in carrying out the teaching process.

I am surprised that educators have not greeted Belth's theories with enthusiasm. Probably not many have studied him, but those who have for the most part allowed themselves to get bogged down in futile argument about whether or not education really is a discipline. The human mind is so fertile that a highly developed intelligence can start from the premise that education is not a discipline—and develop a logical argument to support the assumption. Fun and games can then be had in subjecting the logic to linguistic analysis. What one good mind has created another good mind can tear apart.

A discipline is only a special kind of structure. To say that education is not a discipline is to say that education is unstructured. As it now exists, education is not structured. In this sense it can't be a discipline. But structures are man-made. Education can be treated *as if it were* a discipline and appropriate structures created. This, as I see it, is what Belth has done. And everyone concerned about education should be very grateful.

The Belth models are not necessarily perfect. None of the established disciplines was complete in its initial structuring. Every discipline is being continually restructured—unless it's a dead language. Development occurs through the refinement and replacement of structures.

The Belth models give teachers a foundation upon which to build their profession—a structure within which they can start making and accumulating knowledge and identifying needed competencies—a basis for rational decision-making—a common symbol system, a common purpose making possible dialog, unification and integration. (Every teacher, regardless of subject or field, would be in command of the same five methodological models. Every model would be used appropriately sometimes by every teacher.)[6]

New models can lead to new discoveries which permit modification of theory to incorporate the new knowledge discovered. In this way theory grows and develops.

This is what Marc Belth has given us—a new theory, an 'action' theory that, once understood, can be applied by any teacher, a theory that can grow and develop.

In its growth and development can come a closing of the knowledge gap, the gap which is currently forcing teachers—including many of those in faculties of education—to depend upon intuition, to 'fly by the seat of their pants.' §

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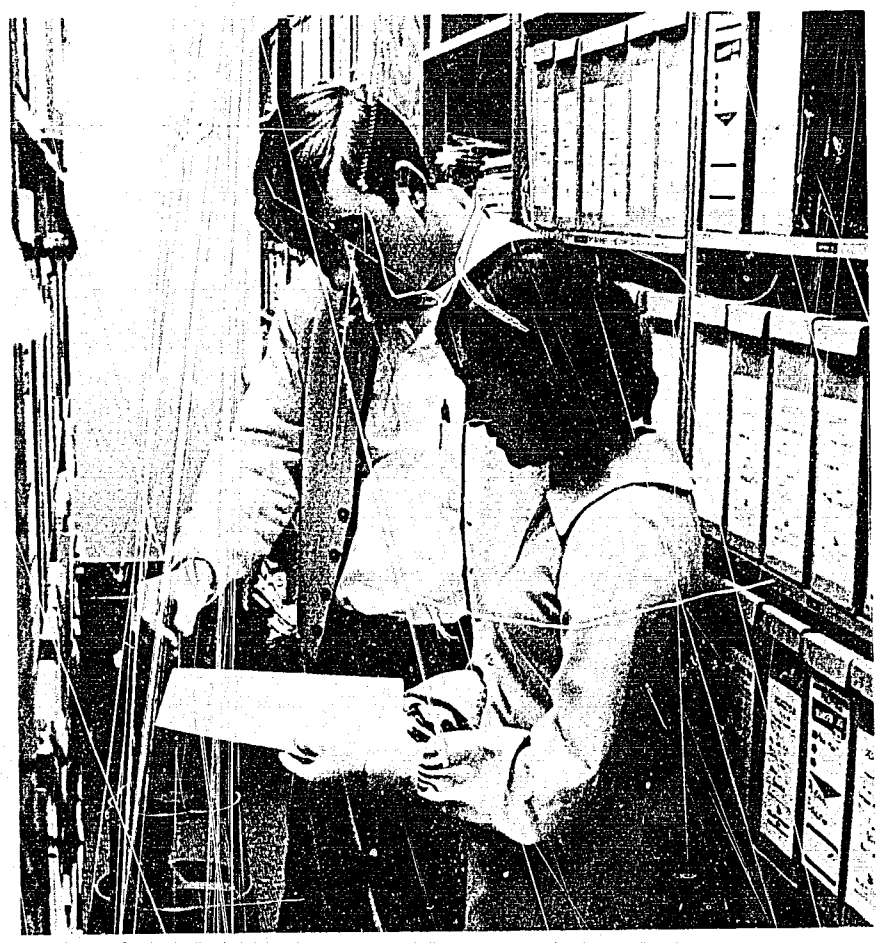
[6]Marc Belth, *The New World of Education* (Boston: Allyn and Bacon, 1970)



Teachers need theory to guide their practice. Barbara Coles and Peter Rohloff find useful materials in the BCTF's Resources Center.

Learning through involvement

Sixty Grade 8 students in Mt. Prevost Junior Secondary School in Duncan are enjoying and benefiting from an experimental 'Learning through Involvement' program.

Mrs. Pat Clarke and I, the two teachers involved in the experiment, are enjoying it too.

We are attempting to train the students to think for themselves and to let them develop their natural creative instincts. We therefore give them a great deal of freedom. So far, the experiment is working well.

We began planning the program early in 1968. We visited a number of progressive schools for ideas and read a number of articles and books. We came to the following conclusions, which became the basis for our experiment:

- Students have the right to be treated as individuals; we should accept them as they are. They should be given enough freedom to grow in the direction in which they want to grow.
- Much material taught in schools is not really necessary. Students should be learning skills they can apply outside the classroom.
- Many students simply 'tune out'; we must narrow the generation gap by communicating more effectively. The teacher should act as a learning guide to motivate student interest.
- Learning is a natural process, and students want to learn. It is the teacher's responsibility to create the right atmosphere and to provide suitable resource material for learning.
- Our program should be designed to lead students rather than push them, and to allow children to accept responsibility for their own learning activities.
- While they are in the elementary school, students are usually taught each year by one teacher. In junior secondary school the educational process becomes more complicated, and involves several teachers. There appears to be a need for a transitional stage between the two systems.
- We give the students the objectives; it's up to them to decide what path they want to follow and whether or not they want to make it. We should remember that children are now maturing at an earlier age, and we must accept the fact that they must learn to make decisions for themselves.

In their book, *The Flexibly Scheduled High School*, Wiley and Bishop state that the main reason students are unable to cope with post-secondary school study is their inability properly to handle free time. Subject matter incompetency is only a minor cause of student drop-out.

How much free time can Grade 8 students use? At first we worked on the basis that nearly all time would be unstructured. This soon proved to be unwise, and gradually a number of classes were introduced, but not on a regular timetable basis. At the moment about 40-50% of students' time is unscheduled. This seems to be a more suitable arrangement, and most students are using a good portion of their time wisely. Some students, whose self-motivation is less highly developed, still abuse their freedom, but, if they can learn to use at least some of their time properly, we shall feel we have made a significant step forward.

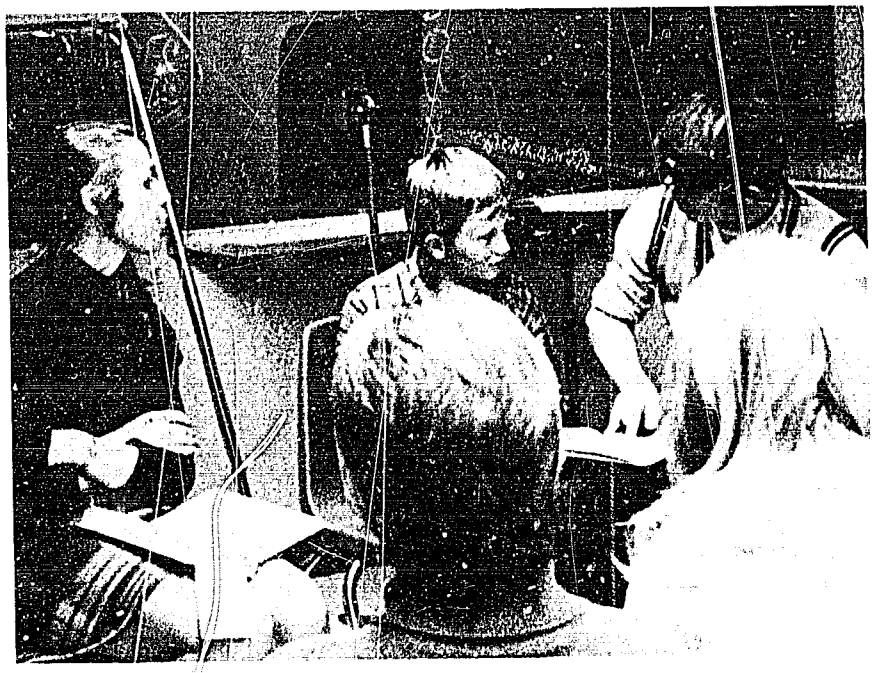
John is a typical student in our group. He arrives at school by bus, as do many of the 600 students at Mt. Prevost School. Most likely he will go straight to his room, which is soundproof and about three times the size of a normal classroom. Just inside the door is a pegboard containing the names of all students in the group. John will move his peg from the 'not at school' to the 'present at school' column. Calling the register twice a day is a tedious, time-wasting chore, so it has been eliminated. To start the day, all students sit in a group for school announcements, Bible reading and prayer. After that, the teachers announce the program for the day. This varies considerably from day to day.

Mr. Levens is a member of the staff of Mt. Prevost Junior Secondary School in Duncan.

A Duncan junior secondary school reports on an experiment in learning through involvement.

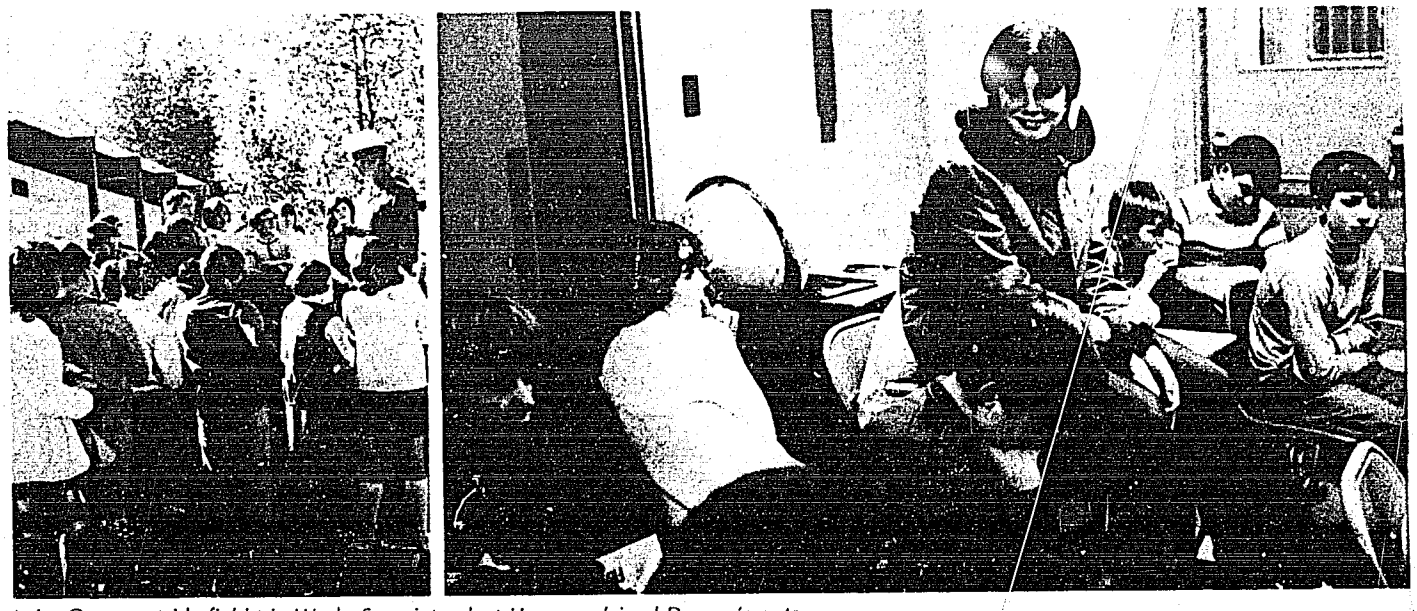
STUART LEVENS

John has been working well in French and has just been promoted from Group 2 to Group 1. For the first 20 minutes today John will attend a French class, which is run just as any other French class is. French is usually held in a spare classroom. After that, while the other two groups are having French, John decides to do the diagnostic math test he has been putting off for several days. He gets the test from the filing cabinet and finds an empty study carrel at which to work. The test is quite short and contains the important points John has covered in the last six assignments. Normally, John corrects his own work, but diagnostic tests are corrected by the teacher.



Tomorrow, John and several other students will meet with the teacher to iron out any difficulties encountered in the test. John is well advanced in math and will soon finish the Grade 8 course and move on to some more advanced work. Of course, not all the students are able to follow the regular Grade 8 math text, so many of the less able students are guided along a less academic line. Actually there are three distinct courses available, equivalent roughly to academic, high vocational and low vocational. Course guides and answer sheets are available to a student as required.

All John's work is entered on a card index, which is stamped by the teacher after each assignment is



Left—On an outside field trip Works Superintendent Hayes explained Duncan's water supply. Right—Students listen to the reading of 'Moonfleet.' This is a voluntary activity.

completed. These record cards provide an up-to-date record of John's overall progress. The cards are kept in a metal file, where teachers and students have easy access to them.

It is almost recess time now, and John does not want to start on a new assignment; he decides he will finish off the game of chess he started playing yesterday with his friend David.

After recess, the whole group meets for an introductory lesson on glaciation. The lesson is illustrated with filmstrips, overhead projector transparencies and maps. It lasts for about 30 minutes and is designed to stimulate student interest for further research into the topic. Children have the choice of such follow-up assignments as preparing an illustrated report or making a plaster-of-Paris relief model, labeling the important features of glaciation.

John decides he is not terribly interested in this topic so, for the time being at least, he skips this assignment. Instead, he and another boy decide to work on one of the learning kits the teachers have prepared. These learning kits each contain a variety of teaching aids, including audio-visual materials. The one John is using is entitled 'Introduction to Scale' and contains a model Volkswagen, an aerial photo, blueprints of the school and an instruction sheet.

The classroom resource center contains a small library, encyclopedias, and a variety of audio-visual devices that will help John in his assignment. He also has access at any time to the school library; however, he must always indicate where he can be found by moving his peg on the pegboard to the appropriate column. It is important that teachers know where a student can be found at any time.

After lunch, John attends a class in reading dynamics. Ten weeks ago he could read 200 words a minute and obtain 80% comprehension. Now he can read at 1200 wpm with 75% comprehension and is improving each week. This is a new course designed especially for junior secondary students, and nearly all the children in the experimental group have shown similar improvement in reading efficiency. The course is available to other students in the school during lunch hour four days a week.

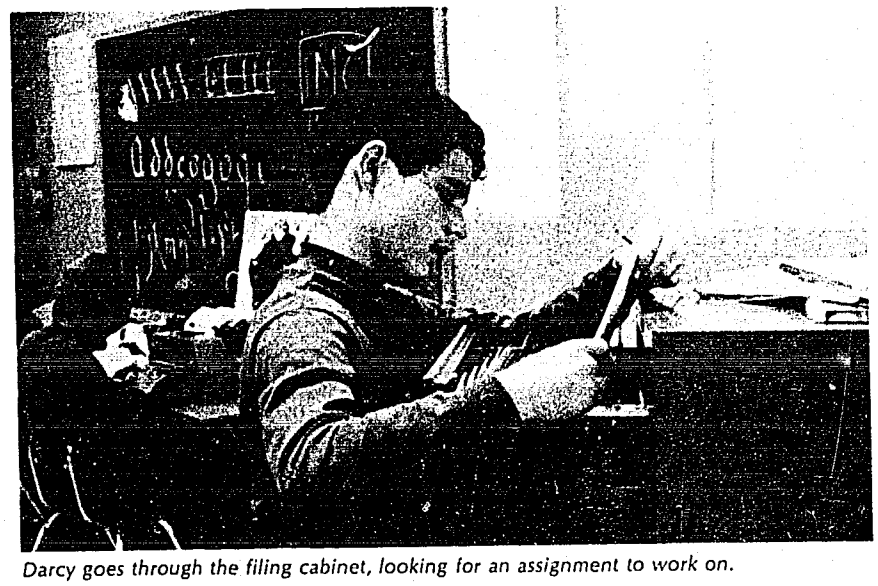
After reading, John and all the other students in the group leave the open area to attend optional classes in various parts of the school. This is the only time children leave the experimental group and meet with other teachers.

The last period of the day is given over to a class meeting. These meetings are held once each week with a different student chairman each week. Students are free to bring up any topic and make suggestions on how to improve the class. Both teachers and students can present motions and can vote. Teachers have the right to veto a decision, but have not used that right yet. John feels that, by attending class meetings, he is helping to make decisions that affect his school life. Up to now, most of the discussion has been devoted to non-scholastic details, but we hope that eventually the children will want to have a say in their learning activities.

Of course, there is no assigned homework, but many students take work home with them because they want to keep up with their work. Quite a number of the students are developing a sense of responsibility in that they are recognizing that if they waste time during the day, they must make up for it by doing the work at night.

The following day, John finds he has four periods of unscheduled time. This gives him a good chance to get involved in some more assignments. All the assignments are listed on a chart, and John is free to choose any one of them. Work sheets have been prepared for each assignment and are available from the filing cabinet. At the present time, more than 100 work sheets are available to the students and the number grows daily. Mrs. Clarke and I have made every effort to make the assignments meaningful. In many cases they are 'fun' assignments in

Dagmar and Peter go over the French lesson again, using the headphones so that no one else will be disturbed.



Darcy goes through the filing cabinet, looking for an assignment to work on.

which the student has a kind of game to play. The children enjoy assignments involving creativity, and a really great spirit is developing in the group.

The science laboratory is available on six occasions each week and John can make use of good science facilities when he wishes to complete an experiment. Of course, teachers are always present in the lab to assist students with the equipment.

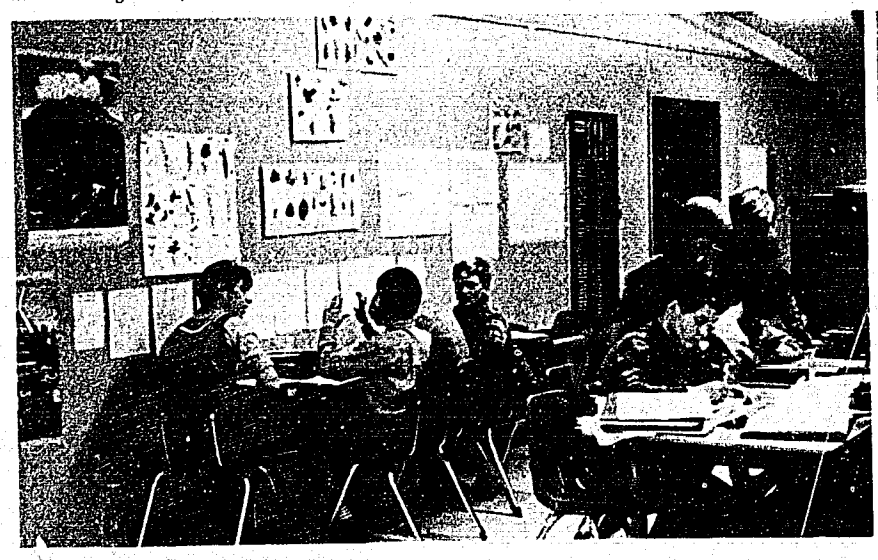
Afternoons are often given over to activity groups. One group of 16 students rehearsed a 15-minute television show based on 'Laugh In.' The children went to the TV studio at the secondary school and videotaped their production.

Another group of students learned to square dance during their activity period. Others have been concentrating on drawing and painting, script-writing and model-making.

The noise level in the room is somewhat high, but most students find they can work quite efficiently in a noisy situation. For those students who require quiet, there are plenty of peaceful spots around the school to which they can go. The school library is a popular place.

In addition to being involved in inside activities, John has been on five outside field trips, and has found that learning from first-hand experience is very effective and also very interesting.

Learning activities go on in one corner of the room. Note the pegboard, in the background, that is used to indicate attendance.



Sometimes the floor is the best spot to work on an assignment.

I should emphasize that students are under no pressure from their teachers. There are no 'due-dates' for assignments, for example; children are encouraged to set their own deadlines. At the beginning of each week John receives a 'contract,' which he fills out with a program of study for the week. At the end of the week, he hands it in, initialing all the work he has completed during the week. We then make a positive comment on the contract, no matter how much or how little work has been completed. At report card time, John will receive a report containing three grades only—Good, Normal or Incomplete. However, there will be a comprehensive written report containing a number of positive comments.

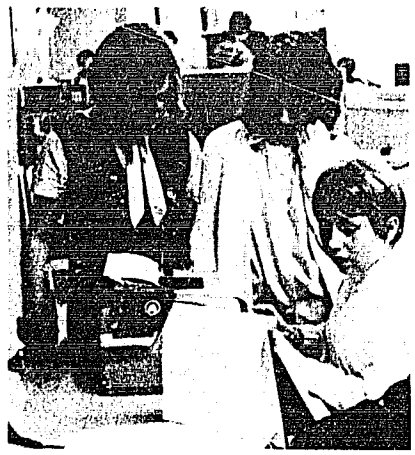
Just prior to report card time, John will meet with his teachers for a discussion of his overall progress, a very valuable exercise. Teachers can be quite honest with John and point out where his weaknesses lie and how he can improve his work in these areas. Actually, most children know their weaknesses, but need guidance on how to overcome them. Parents are given ample opportunity to discuss their child's progress. Between September and January there were four evenings available for parent-teacher interviews. At these meetings parents can be given more precise letter gradings if they want them. Dialog with parents is, of course, most welcome at any time.

At the beginning of the year, John and the other Grade 8 students went through a series of tests. These same tests will be given again at the end of the year. Our purpose in doing this is to find out if there are any significant shifts in the experimental group as compared with a regular Grade 8 class. The tests we used were: Differential Aptitude, Peabody Picture Vocabulary, Torrance Tests of Creativity, Minnesota Achievement Tests, Actual and Ideal Self, and a value inventory. Although we are fully aware of the dubious reliability of such tests, we believe some significant changes will become evident. We do not expect any marked changes in scholastic achievement or aptitude, but we do think the experimental group will become more creative than the control group, and that a number of personal values will alter significantly in the experimental group.

It is true that some students are not doing very much, but we doubt that they would learn any more if placed in a regular class. In our classroom these students are happy, and are certainly no discipline problem. We feel they are becoming socially adjusted and probably learning to develop some sense of responsibility.

Even at this stage, it is obvious our experiment is a success. However, I doubt very much that this type of learning situation has very much future, first, because of the difficulty of obtaining two teachers who could work together in harmony under such conditions and, second, because of such environmental difficulties as suitable areas and sufficient learning resources. But I am sure this experiment will pave the way for moving the rest of our school to modular-computerized-timetabling, with a percentage of unscheduled time for all students.

The individual filmstrip viewer is very useful to students working on assignments.



Students get involved with many activities. Here Cathy is learning to type.

Shortly after the above description of our experiment was prepared, we made some changes in the operation of the group. Because there had been considerable pressure from students outside the group, and from their parents, for their admission to the experimental group, we have now admitted 20 more students to the program. This, of course, means that more staff members have become involved. Three additional teachers are assisting by taking small groups of students for instruction in areas in which they have weaknesses, but these teachers spend only part of their time with the special group.

We also have five teacher aides who come in two half-days a week each to assist with clerical work. The aides also take charge of the resource center and issue all the learning materials required by the students.

Finally, we extend an invitation to any teacher or administrator interested in seeing this experiment in operation to visit the school.

The revolution in methodology

An interim report

A humorous look at the trials and tribulations of keeping up to date with the new teaching methods.

ALAN DAWE

¶According to the latest information available, the revolution in teaching methods actually began in British Columbia on the afternoon of Friday, February 13, 1964, when an English teacher in Kamloops told his class to move the desks into a circle where they could all discuss literature without taking the risk of boring anyone by reading a poem or so. Things moved along rapidly after this, and by October 2, 1965, arguing in a circle was generally accepted as *the* way to teach, unless the class was off on a field trip.

The revolution was not, of course, universally applauded. That old straw-man, the stand-up teacher, strongly objected to being knocked down and discredited. And taxpayers in more than one school district argued that archaeological field trips to the community's garbage dump were, to say the least, premature.

Most incensed of all were school custodians. In several schools they staged wildcat walkouts to protest the sweeping changes. What they disliked most was having to sweep round and around in those circles. They also claimed that all the fun had been taken out of their work now that the blackboards were never used and there were no brushes to pound at the end of a dirty day.

A second major advance was not long in following the first. This was the timetableless school, a state of mind that was soon to be followed by the teacherless school and the pupil-less classroom. (At no time were the administrative staffs seriously threatened.) The teacherless school and the pupil-less classroom were only moderately popular, but the timetableless school was an immediate hit. For the first time many teachers found themselves in a truly competitive position within a free enterprise system.

Of course those who wouldn't or couldn't compete with what was being dished up in other parts of the timetableless school (the cafeteria, for example) often found themselves engaged in unilateral discussions with the tack board at the back of their classroom. But an English teacher of my acquaintance was not one to let the competition get him down. He took the free-enterprise approach. He advertised.

Every morning he posted outside his classroom a sort of menu for the day, and so lyrical were his descriptions that he usually succeeded in making the popgun and donuts in the cafeteria seem like pallid fare. A typical mid-week menu would read something like this. *Morning Special:* 'Scrambled Syntax With Hot Buttered Tenses.' *Noonhour Feature:* 'Soup de Journal of the Plague Year a la Daniel DeFoe.' *Afternoon Special:* 'Half Dozen Raw Odes On The Half Shelley.'

But a history teacher down the hall who tried a similar gambit had only partial success. Although his billboard promising 'Girls! Girls! Girls!' brought the crowds to his classroom, none of the older boys stayed around when he began his fascinating unilateral discussion of the Suffragette Movement in pioneer Ontario.

The next major revolution on the horizon, according to a man I know who happens to be a forward-looking publisher's agent, will be the replacement of the traditional textbook with something to be called 'The Complete Educational Package,' or TCEP. A typical TCEP bundle will contain only a minimum of printed material. It will consist instead of tapes, filmstrips, movies, long-play records and color-slides, plus a four-color grid map especially designed to convince the traditional teacher that he isn't lost.

Recently I had a chance to examine one of these fascinating TCEP parcels. It was designed for a course in Theoretical Carpentry at the Grade 11 level. Among its many technological niceties were several little packages of various types of wood shavings, which have been included to keep the course from seeming *too* theoretical. In the interests of durability, the Textbook Branch has suggested that the wood chips be made out of colored plastic.

So we arrive at an inescapable interim fact. Whether we like it or not, we must teach in a climate of never-ending educational change. Not even the most established of our principles is safe. Last week I saw a young, experimental teacher arranging the seats in his classroom into neat, aggressive rows. §

Mr. Dawe, a frequent contributor of light items for these pages, teaches English at Vancouver City College.

PARENTS AT THE

The B.C. Parent-Teacher Federation examines the proposals in the COFFE Report. Some of the suggestions meet with the approval of parents, but there are severe doubts about others.

¶As parents concerned about the education of our children, the Education Committee of the B.C.Parent-Teacher Federation read with great interest the report of the committee set up to consider the future of the faculty of education at UBC.

From our own observations of the schools and from discussions with both pupils and professional educators, we had concluded that there were four areas in which *every* teacher should be well-trained, and initially, we were searching to see whether or not members of the committee agreed with us.

The first area is a thorough understanding of child psychology, with emphasis upon three major concepts. The first of these is the principle of readiness, not only for such motor skills as walking, but also for such cognitive skills as reading, arithmetic, and the concepts of time and distance. One corollary of this is that not all children are ready at the same chronological age for curriculum involving such skills; another is that all successful teaching begins at the point where the child is.

The second is an understanding of mental health, with awareness of the extent to which success at school contributes to the child's positive self-image, and with skills in identifying children who need help from specialists.

The third requirement is an understanding of group dynamics, so that the teacher is sensitive to the effects children have upon one another, and to the repercussions of the kind of leadership he is providing; without this background, he will fail to understand much of the behavior of his pupils.

The second area is teacher-parent and teacher-community relationships. With the current popularity of teacher-parent conferences instead of report cards, it seems self-evident that skill in focusing a 15-minute interview should be part of every teacher's professional repertoire. Social workers spend many hours during a two-year course learning the specifics of this skill, yet we often expect teachers to perform the same task on the basis of intuition and a few encouraging words from the principal.

We profess to believe in 'breaking down the walls between school and community,' we ask teachers to adjust the curriculum to the community in which they are working, and to use community resources in their teaching. We should therefore undertake to give them some workable techniques for finding out what their community is really like.

The third area is developmental reading—not just for elementary and English majors, but for *every* teacher—elementary and secondary—and also for school librarians and administrators. All of these educators need to understand that, because of individual differences, in

LOOK COFFE REPORT

MARGARET ENNENBERG

every classroom there is a wide range of reading skills. In *any* subject, texts and reference books suitable for the 'average' child in the grade will be too difficult for as many as one-third of the children, and too easy for another third.

If all children are to have equal opportunity to learn and to do independent study, reading materials and instruction geared to their individual needs must be made available throughout all the grades of the public school—and all teachers must be equipped to provide it. In our technologically advanced society, there is no longer any substantial space for functionally illiterate 'hewers of wood and drawers of water'; reading is a necessary tool of survival.

The last area in which we believe all teachers should be trained is the use of non-print media—films, filmstrips, tape recorders, overhead projectors, educational television. There is apparently no subject that cannot be made more vivid, more interesting, through the wise use of these means of communication.

We need an adequate supply of good materials related to our curriculum goals, and the equipment necessary to project them. But to the extent that teachers have not learned how to integrate such materials into their teaching methods, to that extent shall we waste the money invested in educational television, multi-media resource centers, and audio-visual equipment.

We hoped that some members of COFFE would be aware of these needs, and would see that they were incorporated in the report. We were disappointed to find little evidence that this has happened. We can perhaps assume that the field of child psychology will be covered during the intensive courses planned for the first semester of year III, and again in greater depth in year V, and we can hope that there will be some focusing in the direction we have indicated.

It is possible that teacher-parent and teacher-community relationships may be covered in the same way. Developmental reading, however, is clearly regarded as a field of specialization. And as for non-print media, its use has been relegated to the status of an 'event' that *may* be arranged in conjunction with the B.C. Teachers' Federation!

Writing now as an individual, I should like to express my personal concern about the general direction taken by COFFE, a basic decision of which the foregoing are but symptoms—the decision that the present situation in teacher training calls for more specialization.

Many years ago Great Britain took this path in the education of social workers; people were trained to be psychiatric social workers, or probation officers, or almoners, or child care workers or group workers, and required further training whenever

they moved from one specialty to another.

But on this continent it was decided that there was a body of knowledge and skills basic to all branches of the profession, and that it was the responsibility of schools of social work to communicate this in such a way that it became incorporated into the very personality of the social work student. In subsequent employment he has to learn the function and resources of his agency, and is then expected to apply his professional training to the situation. Largely because of the greater flexibility resulting from this approach, America rapidly became world leader in the field of social work, a position she still retains.

I had hoped that COFFE would take its cue from this experience, and from the success of Arts 100 and of similar integrated humanities programs at the secondary school level. It seems to me that, in education as in social work, there is a body of knowledge and skills basic to all branches of the profession (including, incidentally, adult education in universities and all post-secondary institutions), and that this should be communicated to all teachers.

Then there are perhaps three types of teaching methods—one to be used in teaching the humanities, one to be used in teaching science and mathematics, and one appropriate in teaching the visual and performing arts. I am not trying to suggest that these three are mutually exclusive, or that there is only one method for teaching each group of subjects, but simply that, in terms of structure and objectives, these three areas of learning are very different, and it is not too difficult for the student-teacher to decide in which of them he wishes to specialize.

During his practice-teaching, it seems reasonable to expect him to demonstrate that he has so thoroughly absorbed both the professional foundations and the methods appropriate to his broad specialty that he can, with gradually increasing expertise, apply them to a particular segment of the curriculum and a particular group of children.

I have deliberately left to the last, consideration of one of the most controversial aspects of the COFFE Report—the recommendation that, during the fourth year of their five-year course, pairs of students will be in complete charge of a classroom for half a year, and will be paid for their services.

We leave it to the BCTF to defend the interests of its members in this matter. As parents, we are primarily concerned about the children in these classrooms.

We are fully aware that these student-teachers will have fully as many academic and professional credits as those now being given an Elementary A certificate to take complete charge of a class. We also understand that this procedure was designed to solve a problem that reaches endemic proportions in an era of rapid change—that, in many cases, there is so little connection between teaching methods advocated at the Faculty of Education and those practised by the sponsor-teachers that the student-teacher is torn between the two—and we sympathize.

But surely there must be some other way to solve this problem than to subject pupils—including first graders—in hundreds of classrooms to two pairs of teachers in a single year. We know that most children are resilient—but for those who are not, it could be disastrous. Many primary pupils are upset even when a substitute takes over their class for a few days, and if a teacher must be replaced mid-term for some unavoidable reason, it takes them some time to get used to the new teacher and her ways.

Even if teaching methods are similar, personalities and standards of conduct and methods of communication vary. While the child is learning the ways of the new teacher, he may not be learning very much reading or arithmetic. We have told our members about the COFFE plan for teaching associates, and asked them for their opinion. Not all the replies are in, but the general consensus so far seems to be negative.

There is no subject that cannot be made more vivid, more interesting, through the wise use of non-print media—films, filmstrips, tape recorders, and the like.

We are pleased that education is to be a five-year course for elementary as well as secondary teachers. We are pleased that there is to be a personal interview before any student is admitted to the Faculty of Education. We are pleased that diagnostic and remedial services will be available for student-teachers showing personality aberrations, and that those refusing to make use of these services will be asked to leave the profession regardless of academic brilliance.

But we do wish that a different approach had been taken to specialization. And we are unhappy about the proposal for teaching associates. §

The semester system offers so many advantages that it will be the form of secondary school organization very shortly says the principal of one of the schools that have adopted semesters.

THE CHALLENGE OF SEMESTERS

T. G. ELLWOOD

One of the most significant trends in our secondary schools today is toward the semester system of operation. In fact, if this trend continues at its present pace, most of the province's secondary schools will be operating on semesters within the next two or three years.

This corresponds to the Alberta experience, which saw the acceptance of the semester approach by almost every secondary school within a five-year period.

Just two years ago, the Nanaimo District Senior Secondary School introduced the semester system to B.C. Last year approximately 25% of our province's secondary schools adopted a semester plan and indications are that many more are using a semester system this year.

The semester system appears to be gathering support from a variety of sources. Both teachers and students who have had an opportunity to work 'on semester' tend to support it, as does educational research. School boards and taxpayers, who view the mounting cost of education with alarm, also support the semester concept because it appears to offer some economies in addition to fuller utilization of facilities and resources. Consequently it seems inevitable that within a short time the semester system will be universally accepted in B.C.

Mr. Ellwood is principal of Elphinstone Secondary School, Gibsons.

What is the Semester System?

There is nothing mysterious or complex about the semester system. The regular ten-month school year is simply divided into two five-month terms or semesters. A student's regular seven- or eight-course load is distributed between the two semesters. He takes half his year's work in one semester, and the remainder in the other. A student in a semestered school would, for example, take his English, mathematics, industrial education and art in one semester and his social studies, science, PHE and French in the other.

A course remains the same in content, and approximately the same amount of time is devoted to it, but this time is compressed into a five-month period. As a result, the student has to contend with only three or four courses at a time.

Is the Semester System Educationally Sound?

There appears to be no conclusive evidence to suggest the ideal length for a course—ten months, five months or 18 months. Our present ten-month school year has little educational justification, for it evolved from the needs of an agrarian society.

The semester approach, however, provides both an increased frequency in instruction and a concentration of instruction that educational research indicates should contribute to more effective learning and higher achievement levels. The total immersion concept so effectively used by some foreign language schools is predicated upon these same principles. In the semester system the student sees his teachers every school day and in some systems twice on some days.

A controlled study in Red Deer, Alberta, initiated in 1949 and still continuing, was reported on in 1964. At that time the semester system had resulted in a substantial increase in student achievement. This was determined by examining the work of the same students taught by the same teachers before and after the school introduced the semester plan. The number of B grades in the school involved increased by 15% in one year, and the gain has been maintained ever since.[1]

Semesters Increase Student Motivation

Students have indicated that they are inclined to work harder when on semester. No doubt the immediacy of their individual subject goals

The swifter pace forces teachers to prune trivia from their courses and to prepare their lessons with greater care.

contributes to such positive motivation. The end of the course is in sight right from the beginning. The course moves along quickly without any slack periods. This increased pace, together with the concentration of the course, seems to convey a sense of urgency to the student.

Students feel they are receiving better teaching than before. The swifter pace has forced teachers to prune a good deal of trivia from their courses and to prepare their lessons with greater care. The student appreciates a well-prepared teacher and appears to respond with a greater effort of his own.

Semester Organization Offers Greater Flexibility

The structured, specialized curriculum of our modern secondary school, when combined with the ten-month school year, can become a discouraging trap for many students. One or two course failures can put a student a year behind and encourage him to quit. Some senior students find out too late that they have embarked on the wrong program. Too bad—but it may cost them a year. Some are not prepared to pay this price and drop out of school, seldom to return. Other senior students find, after 12 years of school, that they are just one or two courses short of graduation and are discouraged by the prospect of another year in school.

Semestered schools cannot change the government's curriculum requirements, but they can be more flexible in applying these requirements. In all but the smaller schools, failed courses can be repeated immediately in the same year, but in the next semester. The increased opportunities to take more courses gives students the opportunity to pick up some subject deficiencies as part of their normal load.

Program adjustments or changes can be made at the end of the first semester for students on inappropriate programs. Grade 12 students one or two courses short of graduation are encouraged to return and complete their requirements in the next semester.

The increased flexibility of semestered schools probably is responsible for the new phenomenon of the drop-in as opposed to the drop-out. Previously discouraged students are returning to school in the second semester and are completing their school work. Interestingly, several semestered schools have noted a drop in their drop-out rate.

Combined with policies of subject promotion as opposed to grade promotion, semesters enable the secondary school to move one step closer in practice to the concept of continuous progress. In fact, semestered secondary schools can now accommodate a second influx of elementary students into Grade 8 at the beginning of the second semester.

Although the semester system can accelerate the graduation of some students, this is not its objective. Educators hope that the semester system will offer students an opportunity to take more courses and obtain a broader background during the five years of secondary schooling.

Semester System Maximizes Resources

All schools face the problem of providing sufficient reference materials for their students. The semester plan does not increase the actual amount of such materials, but it can double their availability and use by distributing the demand for them throughout the year.

Typically, a horde of students suddenly descends on the library and creates an impossible demand for a limited number of reference books for a few days or weeks. This results when a full grade in one subject area receives a research assignment at the same time. Usually the demand for specific reference books is too great and many students do not get the opportunity to obtain them. Ironically, these same books often lie idle on the shelf for the rest of the year once the urgent demand is over.

Most schools operating on a semester system offer their core courses in both semesters. Therefore only half the students requiring a specific course are enrolled in it at any one time. This distribution of students reduces the demand for reference materials at any one time, thereby giving more students an opportunity actually to obtain such books. This situation also encourages use of such materials through-

out the year more effectively.

Similarly, the semester system offers greater economy in expenditures for textbooks and better utilization of them. Traditionally, all Grade 8 students take mathematics for ten months. Each student is issued a textbook for this period of time. Ideally, the semester divides the Grade 8 students so that half take mathematics in each semester. Therefore only half as many textbooks are used, but they are used twice each year.

This same type of economy and greater utilization can be achieved in almost every subject area from the science lab to the industrial shop. The emphasis, however, should not be on economy, but on providing students with greater access to the resources and facilities of the school by a more effective distribution.

Semester System Offers Fuller Use of Facilities

School authorities are constantly being required to accommodate a rapidly increasing school population. This task has been complicated by the reluctance of taxpayers to provide the necessary authorization for new facilities. Many citizens are irate about the apparently limited use of expensive school facilities, and are demanding more efficiently run schools.

School administrators have tried to cope with accommodation problems through the use of shifts or extended days. The semester system, however, may prove to be the most effective way to obtain maximum use of school facilities and resources. Schools can combine either the extended day or the shift with the semester system to obtain even greater utilization. However, I shall confine this discussion to the benefits offered by the semester system alone.

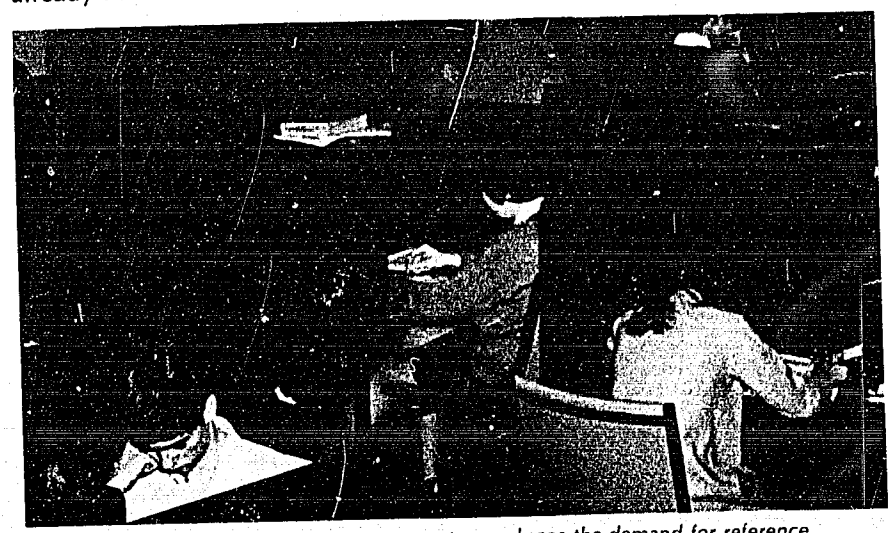
Perhaps the following illustration best indicates the type of increased use of facilities that can result from a semester system. If a school has four science labs and operates on the traditional ten-month year using the typical five one-hour periods daily in a seven-day cycle, it could provide for 28 different science classes during the year. These classes would receive approximately 125 hours of instruction.

A typical semestered school using the same five one-hour-period days in a four-day cycle could place 32 different classes in these same four labs during the year. These students would receive 115 hours of more concentrated instruction.

One B.C. school has successfully introduced a 90-hour-course semester. A school using this model could place 40 classes in these same four labs during the year.

A problem that plagues most schools is inadequate storage space. The semester system can offer some relief for storage problems. I have already indicated that the semester system requires fewer textbooks, which in turn require less textbook storage space. Such activity classes as industrial education, home economics and art require space for students to store their projects between class sessions. In the semester system the number of students actually enrolled in such courses can be half the number enrolled in the traditional-year pattern. Therefore the demand for space is reduced.

The objective is not to eliminate necessary storage space, but to use the space available more effectively.



The distribution of students in a semester system reduces the demand for reference materials at any one time and more students can actually obtain reference books to study.

External Factors Support Semester System

Public schools do not operate in a vacuum. Schools are a part of society and must interact with the variety of forces at work within this society. Schools cannot afford to ignore the mounting public concern about educational costs and school utilization. Nor can teachers disregard student demands for more effective and worth-while instruction. The new education finance formula and the recent defeats of operating referendums are manifestations of general public dissatisfaction with expensive but mediocre education. Parents and taxpayers want good schools. They want the best education for their children, but they also are beginning to insist that our schools and teachers be more efficient and effective.

In response to public pressure for greater utilization of public schools, the provincial government established the Committee on School Utilization in January 1968 under the chairmanship of J. L. Canty of the Department of Education. In October 1969 this committee submitted its report to the Minister of Education, with a recommendation that the semester system of organization be developed throughout the secondary schools of the province.[2]

In January 1970 further official encouragement for the development of the semester system occurred with the introduction of a second series of Grade 12 Departmental examinations, offered at the end of the first semester.

There are other significant external factors that encourage the de-

Continued on page 76

MARJORIE MITCHELL

¶As a former B.C. teacher, I wish to respond to the article, "How Well Do We Teach Indian Children?" in your January 1970 issue.

Undoubtedly, the authors are well-meaning, and much of their essay indicates a sincere attempt to understand Indian children and some of the problems they face in a middle-class-dominated, white-centered educational system. However, certain passages show a distressing *lack* of understanding and very erroneous opinions; it is with these that I quarrel.

First, the statement that 'most Indians agree that they are not totally responsible for their conditions' (p. 149) is an equivocating one. It implies that 'most Indians' agree that they are at least *partly* responsible for their conditions. I doubt that 'most Indians' in the province were surveyed or polled for their opinions. As is frequently the case, it is easier to put words in their mouths than to ask the Indian people where they would place responsibility for social, economic and political discrimination and the hardships it brings.

Second, the authors state that many Indians '. . . are too timid to speak up and be heard' (p. 149). What is more to the point is that when Indian leaders do speak out, no one listens. In spite of relatively limited access to white channels of communication, these spokesmen have been telling non-Indian Canadians for a hundred years and more that the Indian people were robbed and cheated of their land, that treaties they made in good faith have been broken or ignored, that promises made them by white men are seldom kept. Few white people have been willing to 'hear' the Indian who speaks out on these subjects.

In describing the 'positive characteristics' of Indians — presumably just B.C. Indians — it is interesting to note that the authors find them 'artistic and original,' loyal, generous, 'unhurried and unspoiled,' humanitarian, and possessing great manual dexterity (p. 149), but nowhere do they confer upon Indians that prized possession of white North America—intelligence.

Instead, one gets the impression from reading the article that Indians are rather slow-witted—'they need time to ponder and decide' (p. 149) and their decisions are 'largely intuitive' (p. 149). I am not sure what 'intuitive' means in this case. One thinks of the discriminatory term, 'feminine intuition,' as irrational de-

cision-making based on emotion rather than reason. Are the authors suggesting a similar kind of 'Indian intuition'?

There are two factors that may be operating here, cultural or linguistic, or both, but neither is put forth by the writers. The first is that among some Indian groups, a cultural value may be placed upon long and quiet deliberation before a decision is expressed to others. This is quite different from saying that the Indian *needs* time to ponder and decide—his mental processes are undoubtedly just as quick and acute as those of non-Indian people (e.g., see Havighurst, 1957; Ray, Ryan and Parker, 1962)—but he *takes* time to consider his decision before stating it.

From a linguistic point of view, if the Indian child does not speak English fluently, it may be necessary for him to translate from his mother tongue into English before he can verbalize his ideas for a non-Indian teacher.

In either case it is nonsense to suggest that the teacher must build his teaching concepts around the Indians' own concepts (p. 149), since if the teacher does not speak the native language of the group he is teaching, or at least have considerable knowledge and understanding of their culture, he can hardly know what their concepts are.

There are several other issues that relate to language and to the authors' concern with the alleged speech problems of the Indian student. Two of the most dismaying statements the writers make can be singled out to show that they are in error. First, they assert that 'the Indian child's experience with abstract language is limited; he thinks naturally in concrete terms, and is unable to grasp the meaning of some of our idiomatic expressions' (p. 150).

I am astonished that presumably well-educated teachers are still under the spell of the old myth that Indian languages are incapable of much abstract expression and are almost entirely concrete. An introductory linguistics course would soon dispel this absurd notion. As many linguists have demonstrated, North American Indian languages are just as abstract and idiomatic, as complex in grammatical structure and syntax, as rich in metaphor and imagery, as capable of satire and irony, humor and drama, as ambiguous and as precise, as any other language, indeed, as all other languages.

If the authors and other teachers with Indian pupils would take the time and trouble to try to learn one of the scores of Indian languages represented in this province alone, they might be less inclined to publicize their unfounded generalizations. They might come to see how difficult it is, in learning any foreign language, to understand and use correctly the idioms and abstract concepts of that tongue, whether English, French, Bengali or Halkomelem.

I am even more dumbfounded that the co-writers, who seem to speak with such authority, are so unaware of Piaget's theory of the development of thought in children and adolescents. The basis of his theory is that young school children think entirely in concrete operational terms while it is not until adolescence that the ability to think in formal operational terms and to deal with the hypothetical and the abstract evolves.

This is the very touchstone of our primary - intermediate - secondary school system of teaching. Yet the authors claim that the Indian child is different from the white child because the former 'thinks naturally in concrete terms' (p. 150). What other way is there to think but naturally? What child does *not* think in concrete terms?

No less disheartening, the writers refer to the difficulties the Indian child has with English as a second language not only as language 'problems' but also as problems of a pathological nature: 'Some Indian groups have trouble pronouncing certain sounds, especially the sh sounds. In the very early stages of learning the skill of English, children who have *speech defects* should be given remedial work' (p. 151. Italics mine).

Again, the ignorance and biases of the authors are painfully obvious. If a French- or German-speaking child, new to Canada, were struggling to learn English, his difficulties with pronunciation of th sounds would be regarded as his 'French accent' or his 'German accent.' When an Indian child has similar pronunciation problems, he has a 'speech defect' —something is wrong with him.

The writers do not seem to understand that some Indian groups (but not all) have difficulty with sh sounds because, in their native tongue, there is no meaningful distinction between s and sh sounds, just as there is no meaningful difference between t and th sounds in French, German or Italian, or between b and v sounds in Spanish.

An English-speaking child learning a Salishan language would experience comparable difficulties in pronouncing and distinguishing between velar k and uvular q, since this phonemic contrast does not exist in English.

One other criticism must be made. To suggest that 'the subsistence existence of partially educated Indian parents on the reserves allows for only a minimal amount of experience and background for their

chil[illegible]n' (p. 150) and that the Indian child [illegible]acks social experiences' (p. 151) is an indication of a very narrow, Anglo-Canadian view of what constitutes social experiences and background. Even children in the concentration camps of modern civilization have social experiences, albeit horrifying ones.

The authors are again missing the point entirely. It is the fact that the Indian child has a cultural background and social experiences very different from those of his white classmates and teachers that makes for the failure of our school system to help him. He is not without culture, traditions, or history; his experiences include some not shared by many white children—namely, poverty and racial discrimination. However, it is easier for the teacher to believe that he has a completely blank background, that he has grown up in a social vacuum, than to bother learning about his world.

Finally, the whole tone of the article reflects what seems to me to be the most crucial issue we face. We persist in regarding the Indian child and Indians in general as problems for us to correct. We ask, 'why does the Indian fail?' instead of 'how have we failed?' We think that the way to correct the problem of the Indian is to make him white and progressive and modern.

Condescendingly, we admire his manual dexterity, but we avoid mentioning his intelligence. We applaud his humanitarianism and his unspoiled ways, but what we really want is to make him over into an image of ourselves. We don't ask the Indian what he wants, what kind of education he might like, because we are afraid he might choose, in his 'intuitive' and 'unhurried' manner, an option not recognized or permitted within the limited confines of our system.

He might say, give us the land you took from us or, if you won't do that, give us *honest*, legitimate, monetary compensation for it and then leave us alone—let us develop an educational system for ourselves and of ourselves, let us come to terms with *your* society on our *own* terms. §

References available on request.

THE GRADE

Why not let a student choose the grade he wants, and then contract with him for the various studies and experiences he must complete to achieve that grade?

HUGH TAYLOR

Perhaps by the year 2000, perhaps before, we shall replace the letter grade system of reporting student progress. However, during the 1970s it is a certainty that letter grades will be the coin of the realm in education.

Grades have social utility value. Consult any university calendar and check the criteria for admitting students into the institutions. The probability is high that Grade Point Average will be the criterion given top priority. Note also the basis upon which scholarships and government grants are awarded.

Ask employers of teachers, engineers, chemists and social workers how they rank GPA as a factor in their process of selecting new employees. A very limited personal inquiry is all that is needed to convince one that letter grades, at present, play an important role in determining the occupational and social future of a large number of students.

Letter grades have been criticized by students, teachers and parents for for more years than we can remember. Attempts to improve the situation by introducing surface innovations, such as the pass-fail option, have had very limited effects on increasing achievement levels or developing more positive attitudes toward the educational enterprise.

Actually, it is not the use of letter grades that should be attacked, but the widespread *misuse* of grades that deserves our concerted attention. How have letter grades been misused? Let me count the ways. From elementary school to graduate school we find the following:

1. Teachers within a school or school system have not co-operatively developed a consistent philosophy regarding the meaning and purpose of letter grades.

2. Letter grades, except in very rare instances, are unrelated to the stated educational objectives, which, to further confuse the issue, are ambiguous, imprecise and often useless.

3. In many cases students are unaware of the criteria used for establishing letter grade standards. This leads to increased anxiety as well as

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CONTRACT ONE SOLUTION TO THE GRADING PROBLEM

inefficient learning.

4. Because of the social significance of grades, parents usually react to them in a highly emotional manner. Thus, instead of improving the learning achievement of the child, the grading system leads to a fear of failure, humiliation and loss of privilege.

5. Employers and institutes of higher learning find it impossible to compare validly the same letter grade for similar courses given at different schools.

The Grade Contract—
A Possible Solution

How, then, can we better the situation? One possible solution for improving the meaningfulness of our grades is to adopt the Grade Contract system.

The grade contract is a program of studies and experiences that is mutually agreed upon by a student and his teacher. It is predicated upon the principle that the objectives of the course have been clearly stated and ordered in terms of quantity and quality. The contract is arranged so that the student chooses the grade he desires and then works out a series of agreements on how the grade is to be attained. If the student completes the contract, he receives his grade. If, however, he meets only part of the agreement, only that level of the contract will be binding.

Grades are cumulative in the contract; to obtain an A, a student must have completed all the lower grade levels. The quantity and quality of the work increases as the grade levels change from D to A. If a student does unsatisfactory work on any part of the contract, he is allowed to try again.

The tasks are judged on a pass-fail or satisfactory-unsatisfactory basis. Thus, the emphasis is on learning and succeeding with a definite de-emphasis on testing and failing. The printed contract, which contains a listing of required tasks and their due dates, is prepared in two copies, the teacher and student each signing both copies and each keeping one for his own use. An actual contract I have used is reprinted on the next page.

The grades used in the Grade Contract system are basically a method of reporting measurements of achievement. When the goals of the course are written in specific behavioral terms, the measurements can be objective and defined operationally. The grades are also valid. That is, the highest grades go to students who have achieved to the highest degree the important objectives in the course.

Further, the grade contract is basically a democratic procedure. It allows for considerable self-direction, individual choice, and responsibility on the part of the student. It requires that the teacher make the objectives of his course public knowledge—this alone is no mean task. It also requires maximum communication and co-operative planning between student and teacher, with a resultant by-product of good human relations.

Let us avoid all the negative aspects of grading that often produce double-talking teachers and confused, defensive students. Let us all, from elementary school to graduate school, resolve to renovate our grading procedure this year. Let's test the Grade Contract. §

GRADE CONTRACT

Education 401 Evaluation of Learning.

Name _____ Spring Semester
Last First

I will do the following things for a grade of A B C D (Circle)	To demonstrate that I have done these things I will
D. 1. Fill out contract in duplicate	1. Submit contract to my laboratory instructor by February 28.
2. Read *Evaluating Pupil Growth* by Ahmann and Glock	2. Pass examinations at the 50% level or receive a Normalized T-score greater than 37* March 10-11 Chapters 1-5 April 28-29 Chapters 6-10 Finals Week Mainly Chapters 11-16
3. a. Prepare an abstract and criticism of an article on evaluation in my area of specialization** OR	3. a. Submit the abstract and criticism to my laboratory instructor by March 7* OR
3. b. Prepare two 4-option multiple-choice test items from assigned chapters in Ahmann and Glock that measure intellectual processes above the knowledge level**	3. b. Submit the items to my laboratory instructor according to the following schedule: Chapters 1-5 by February 28 Chapters 6-10 by April 18 Chapters 11-16 by May 16
C. Complete the D category and	
4. Construct an evaluation instrument capable of measuring progress toward specific goals. This may be a small group (3) activity**	4. Submit the evaluation instrument and an accompanying written report to my laboratory instructor by March 14 and report orally on the instrument to my (our) laboratory class.*
5. Evaluate a standardized achievement test.**	5. Submit a written evaluation report to my laboratory instructor by May 16*
6. Evaluate a standardized ability test**	6. Submit a written evaluation report to my laboratory instructor by May 23*
B. Complete C and D categories and	
7. Understand and be able to calculate simple descriptive statistics and apply them to educational problems**	7. a. Hand in a first set of statistical problems to my laboratory instructor by April 4* and a second set by May 2* OR 7. b. Pass two statistical tests at the 75% level by May 2*
A. Complete the B, C and D categories and either (a) or (b) below	
8. a. Do an original research study on:** TITLE:	8. a. Submit a proposed plan of my study to my lecture instructor by April 4 and a written report of the research by May 16*
8. b. Do a study of studies on:** TITLE:	8. b. Submit a proposed plan of my study to my lecture instructor by April 4 and a written report of the study by May 16*

* Will be graded satisfactory or unsatisfactory. If unsatisfactory, the task may be repeated once. Exception: final exam may *not* be repeated. If final exam is unsatisfactory, you will receive a letter grade, determined by your instructor, *less* than that for which you contracted.

** See your instructor for a copy of the specific objectives.

Date Signed _____ Student _____ Instructor _____

In their world of educational change, teachers need some principles or guide-lines for judging the value of what they do. Here are

Four Fs to Supersede

¶In today's educational ferment some basic foundations must be kept in mind. They are needed as guidelines for gauging the value of any proposed procedure.

The Three Rs, though not dropped, are almost smothered. There are, in addition, Four Fs in education. Facts, Functions and Faith—so that one may learn to know, to do, and to be—are the first three. The fourth is Force—to ensure effective attention to the others. I offer here some thoughts on how they may be implemented.

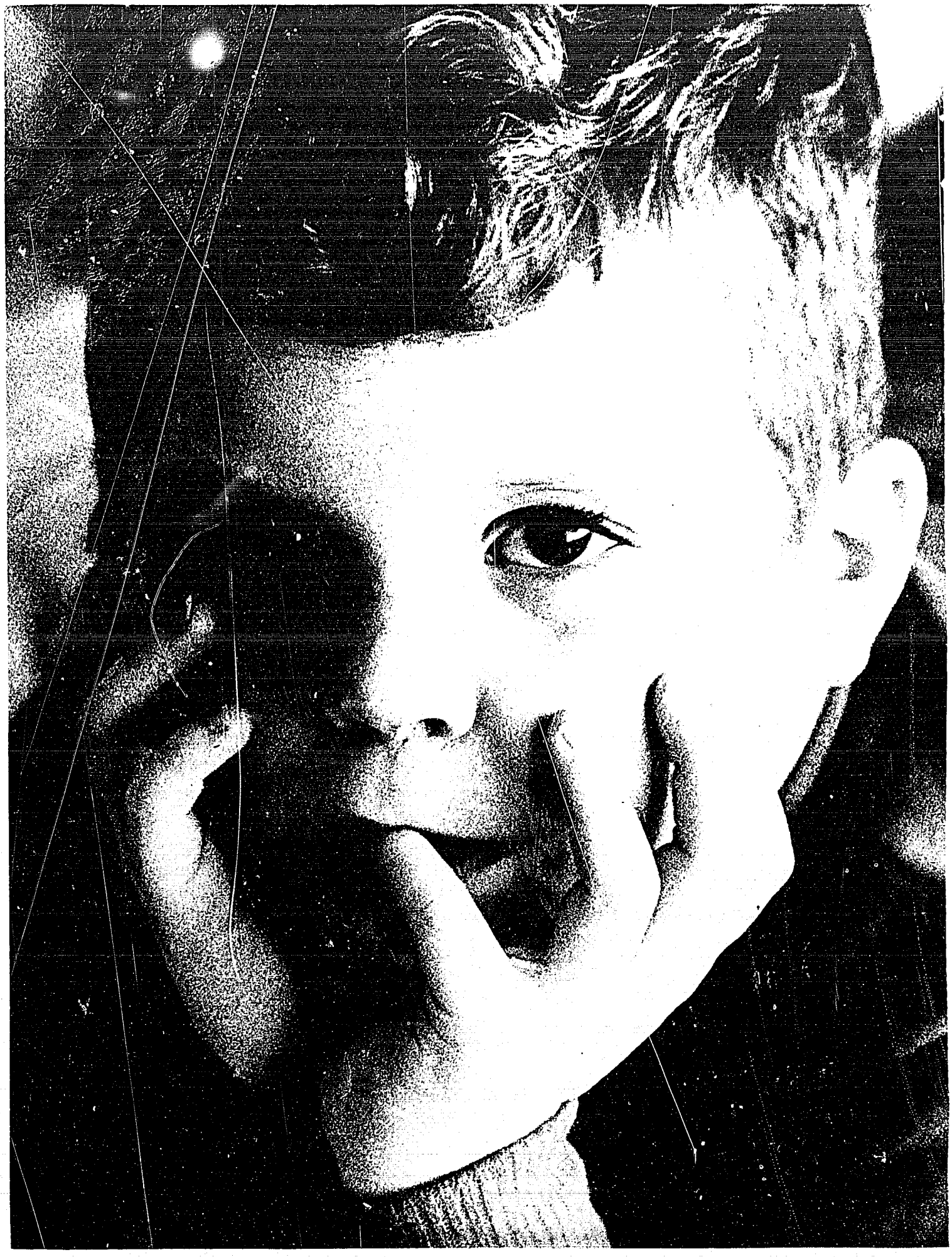
A common complaint about Facts is that teaching them simply calls for memorization and regurgitation, with too little attention to any necessity for thinking about them. Any validity in this complaint is not in itself an argument against teaching Facts. (Consider the popularity of the TV program *Reach for the Top*.) Obviously, everyone must master a store sufficient to avoid being considered an ignoramus and, in addition, gain a command of that store peculiar to his individual needs. Such command is essential for effective thinking or argument, though some people do attempt the latter without the former.

We must recognize, however, that the degree of permanence required for any particular memorization va-

The Three Rs

R. MORRIS WILSON

Mr. Wilson teaches in Victoria.



ries greatly. A lawyer, for example, may well forget quickly details of a technical case once it is settled.

A further problem is the teaching of how to recognize a Fact, how to confirm it, and how to distinguish it from an opinion, a half-truth, or a lie. The whole world is purulent with propaganda, with Facts being distorted, camouflaged, suppressed and maltreated in every conceivable way.

The percentage of truth in published statements runs the gamut from 100 down to 0. Knowing this to be so, too many people just believe what they want to believe. 'Think with your blood!' was a Nazi dictum and, as Frank Lowe put it, 'The most straightforward-sounding news item can be loaded.'

We also see, for example, how English and French versions of some episodes in Canadian history are sometimes at variance, at least in emphasis. Similarly, the proponents of any scheme are all too inclined, quite naturally, to present only those Facts which support it. So, eternal vigilance is the price, not only of freedom in general, but also of freedom from misinformation.

Elsewhere others have drawn attention to the 'information lag,' the gap between the researcher and the politician, between the scientist and the administrator. If management is the process of converting information into action, the executive must keep his information (Facts) up to date.

Translate Knowing into Doing

This brings us to a consideration of Functions, which are largely the translation of knowing into doing.

Regarding Functions, or skills, it would be difficult to name an activity, mental or physical, for which competent instruction cannot be found, either in or out of school. The physical must not be neglected, not only for developing 'a sound mind in a sound body,' but also for the actual pleasure and considerable social advantage in being competent in some sport or game.

The young are usually ready to respond to the inspiration offered by a great life, a great leader, be he principal, teacher or student.

The problems are the choice of activities and the extent of participation in each.

Here the Three Rs come well into their own, in spite of radio, television, typewriters, adding machines and computers.

Reading is more than ever the R that requires the most attention, and is a *must* for any field. Sure and rapid comprehension must be developed. In school weakness in reading is perhaps most obvious in the common difficulty of deciding what steps must be taken to solve an arithmetical problem even if the actual calculation is simple. It is also seen in weird notions students gather from paragraphs in social studies texts, and in their inability to follow instructions in carrying out, say, a science experiment. Out of school some find the instructions for completing income tax forms troublesome.

The general realization of needs in reading is indicated by the number of courses promoted commercially which claim to develop the desired greater speed and comprehension.

The need for improved 'Riting (penmanship) will not be questioned by anyone who has struggled to decipher the scrawl on some paper carrier's receipt, or who has considered the cost to business of errors arising from careless scribbling.

However, writing is vastly more than mere penmanship. Writing (composition) may be considered as the reverse of reading, in the sense that it is an outflow of ideas rather than an intake.

The same is true of speaking, whether simple conversation or formal debate or address. Speaking and writing together could be called a fourth R—Rhetoric—an important R indeed. As most people speak hundreds or even thousands of words for every one they write, training in writing (composition) should be extended to speaking. Surely there should be no need to emphasize the immense advantages, in both private and public life, of possessing 'the gift o' the gab.' Not all can become polished public speakers, but how often have individuals regretted their inability at some meeting to rise and refute another's remarks?

Some minimum of 'Rithmetic is a necessity, but in some fields this minimum may be very small indeed, e.g., in literature, languages, drama, art and music. Certainly a rising standard must be maintained until it is clear that nothing higher will likely ever be required. Here we encroach upon the sometimes thorny question of prerequisites.

Certainly at present some fields of advanced study or work demand evidence of a higher standard of mathematics than will ever be needed in the study or work. The old idea that a truly well-educated person should know 'everything about something, and something about everything' is sound, if it is not pushed too far. A specialist needs to know only enough about other callings to realize how his own fits into the scheme of things.

One difficulty concerning 'Rithmetic (and mathematics generally) is that there is no magic formula or set of formulas by which all problems can be almost mechanically solved—much as many students may ardently wish it. (The ancient 'Rule of Three' was a not entirely unsuccessful attempt to provide this help.) Weakness in reading hinders the complete grasp of statements made; and the number of these and the introduction of large and complicated numerical quantities combine to produce a fog through which some cannot readily perceive what mechanical methods are the way to salvation.

Here is an example of one kind of question that will stump 90% of Grade 8 or 9 students and a suggested way of tackling such demons:

In the U.K. one meter = 39.370113 inches

In the U.S.A. one meter = 39.37 inches exactly

In which country is the yard the longer?

Explain clearly the reasoning for your answer.

(One or two answers per class seems to be par for the course.) Before explaining or discussing the question in any way, pose this one: A certain jar can be filled by 5 cups of capacity

A, or by 4 cups of capacity B. Which cup is the larger, A or B?

The answer is obvious. Students may then be drawn to see that the two questions are fundamentally the same, and shown that the substitution of simple numbers for the more complex may very well enable the necessary insight.

Much trouble occurs because students find it difficult to visualize in concrete terms. Figures and words are too abstract. Hence the success of Cuisenaire's methods.

Attention should also be given to mental or oral calculation. Besides being useful for obtaining quick rough estimates to check the reasonableness of an answer, it will help one avoid being short-changed by hurried or unscrupulous cashiers.

The Horizon is Wide

Beyond the Rs the horizon opens wide. Good counselling is imperative. Many students know, or think they know, what they want, but this is not always what they need, or is really best for them. Among other failings there is too much trying to 'make silk purses out of sows' ears.' The purpose of each study should be really clear to the student, whether it be general information, exploration, or serious laying of the foundation of a career. When social studies was first made compulsory one student moaned, 'Why do we *have* to take that?' (It is not the most popular subject.) The answer he received was, 'One day you'll have a vote'—and he was bright enough to see the light.

A last point about which activities to choose. What awful miscalculations are responsible for the grotesque imbalance between the attention given to the sciences and that given to the humanities, whose neglect has been responsible for so much of the 'time of troubles' in which we find ourselves? Has the belief—or realization, if you prefer —that whoever controls space can control the world so warped the judgment of the world's leaders that we are embarked on the present insane competition?

Increasing awareness of this problem is apparent. At the national Liberal conference Prime Minister Trudeau said, 'We now have a scientific humanism,' meaning that man has integrated science into his culture. At the same time man knows that the 'potential development and consequences of technical inventions are beyond the grasp of his present understanding.'

The views of some of Canada's top secondary school students are of interest. One: 'I like the sciences better than the humanities. Science is so modern and everything else seems ancient and inconclusive.' Another: 'Science is a clear advance, humanities a vast morass of lies, distortions, "brain-washing," uncertainties.' A third: 'I am torn between politics and science. I am fascinated by research into the unknown, in physics particularly, but I may go into law because that could lead to politics. When I look about me at what is happening in Canada—and anybody can see things aren't right —I feel I want to get into the actual machine shop that runs the country.'

Of course the challenge of the humanities is greater; the greater the pity if many of our brightest intellects shy away from it. Certainly it demands far more than mere intellectual capabilities. Insight is required into the complexities of the human mind and heart, complexities beside which those of the atom are comparatively simple.

Columnist Sydney Harris writes that the really dangerous dichotomy of our time lies not in C. P. Snow's division between the 'scientists' and the 'humanists,' but in the far greater gap between the men who are power-oriented and the men who are knowledge-oriented. (We may assume that the power-oriented include the money-oriented.)

Purpose Matters Most

This brings us to consideration of our third F, Faith.

Faith is a question of beliefs and attitudes, a philosophy of life. It is these which should chiefly guide one's choice of career or occupation. I am not speaking here of religious faith, though that may very well be the backbone of the inspiration required.

We need to believe with Pasteur that what matters most in any endeavor or achievement is its purpose, and with Henry Ford that a prime principle in business should be, 'Perform a service,' even if he did add the practical advice, 'and see that you get paid for it!' We should digest Professor Whitehead's words, 'Moral education is impossible without the habitual vision of greatness.'

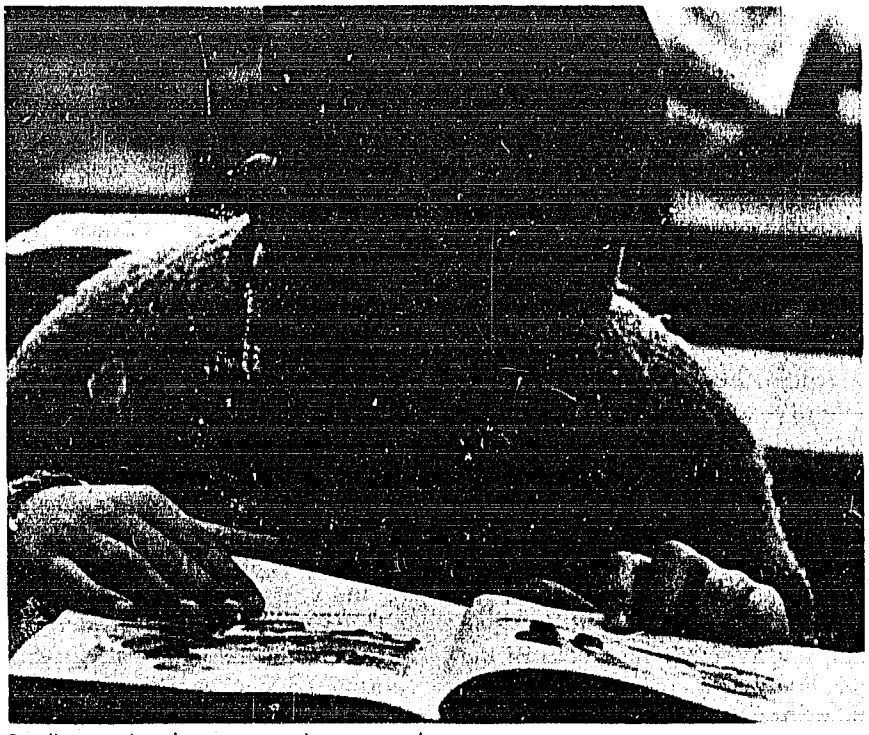
Lack of worth-while purpose and principles and even of a sense of right and wrong seems all too prevalent. Professor Neville Coghill, remarking on Chaucer's interest in manners, wrote, 'One of the things I notice in the 20th century is the decline of manners, the decay of honour and what is noble and truthful.'

Cheating in school work is outsmarting the teachers; shop-lifting is a contest with the store detectives, and so on. The sloppiness of much work and repair work is a byword, and the total cost of these and clerical errors is astronomical. The American space program was said some time ago to be two years behind schedule, and to have cost two billion dollars too much for just such reasons. Not to mention the loss of the lives of three astronauts.

Leaders Have Great Influence

'Example is greater than precept' is an old saw. The human being, especially when young, is inclined to be a copy-cat, and almost from birth is busy absorbing attitudes, ideals, points of view and certain skills, as well as numerous Facts, or what he accepts as such. A child's heredity is already established at birth and environment (i.e., education, training) immediately goes to work. The ultimate result comes from the combined, sometimes even opposing, influences of these two forces. Any animal trainer will testify to the importance of both. With people, the two are much more difficult to control, but many mediocre persons have been brought to achieve astonishingly well, and some remarkable ones have somehow emerged from very unpromising surroundings.

The young are ready to—or at least can usually be brought to—respond to the inspiration offered



Reading requires the most attention; sure and rapid comprehension must be developed for success in any field.

by great lives, not necessarily the most modern. Nearly every youth at times visualizes himself as someone else—whoever is the idol of the moment. If the example is at hand in person, so much the better. How often has a courageous commander led his troops to do the impossible! In a school, as in the army, the influence of a great leader, be he principal, teacher or student, cannot well be measured, but neither can it be questioned.

The opponents of our Western civilization have often succeeded in inspiring their followers with belief in, and zeal for, something just a little greater than themselves. These beliefs and zeals, mistaken though we may consider them, have come uncomfortably close to mastering the world. They will do so yet, unless they are countered by a nobler belief that is at least equally assured and is backed up by practical action. We have no reason to feel sure that dreams of eventual world conquest are everywhere entirely dead.

The promotion of this kind of Faith is not a duty only, or perhaps, even principally, of the schools. The pre-school years are of vital importance. However, the ages from four or five or six on are still critical, and earlier errors and omissions are not yet quite irremediable. Many adults can recall how fortunate they were to have come under the influence of an outstanding personality who set the tone for his whole establishment. Lord Mountbatten recognized that this impact takes time to sink in when he refused to demand the ultimate penalty for a delinquent on the ground that the man had not been long enough under his command to have become properly imbued with the needed spirit.

This Faith is 'caught' rather than taught.

Ideal is Self-Discipline

The trouble with Force is that for most people it conjures up evil connotations, just as for many students its relative, Discipline, brings to mind only detentions and similar unpleasantnesses.

Of course, the ideal to be struggled for is self-discipline, so that the student achieves the drive necessary for him to force himself to do what ought and needs to be done. Self-discipline seems rarely to be innate, and even if it is, it requires guidance and cultivation. During a child's formative years especially, parents and teachers — with their presumed greater experience — must at times insist that this or that be done or learnt. They may make mistakes, but, for every child seriously damaged by too much strictness, twenty have been ruined by too little. Alert young people may know what they want, but they cannot always know what they need. Both shortcomings and latent strengths may well be more apparent to an able and experienced adviser, be he parent or counsellor.

Patricia Neal, the actress, gave a striking example of the effective use of external force in her story of her desperate illness. She stated that she could never have achieved the recovery she did if her husband had not absolutely made her keep on with the required treatments. Doubtless, even at the time, she realized—if only subconsciously—how necessary was this apparent harshness. In any case, she expressed eternal gratitude to her husband for his actions.

How many of us are similarly thankful for having been made to do or to learn something distasteful at the moment? How many of us regret that someone did not force us into what we realize, all too late, was the right path?

There are schools in which large degrees of permissiveness have been introduced. Verdicts on these experiments range from very favorable to quite discouraging. Clearly, the measure of success depends on the self-discipline and sense of responsibility engendered in the students. This will depend very largely on the quality of the teachers and on how intelligently the program is introduced. For each individual an attempt must be made to steer the proper course between developing control and stifling that priceless initiative.

A quotation from Thomas Henry Huxley is pertinent as a conclusion to these thoughts: 'Perhaps the most valuable result of all education is the ability to make yourself do the things you have to do, when it ought to be done, whether you like it or not; and however early a man's training begins, it is probably the last lesson that he learns thoroughly.' §

The Challenge of Semesters

Continued from Page 65

velopment of semester systems. The trimestered Simon Fraser University can accommodate secondary students at the end of the first semester. Schools of nursing and vocational schools can also register students in February. Canada Manpower officials indicate that students can be absorbed much more easily into the labor market when the influx occurs twice instead of once a year.

Semester System and School Size

Any size of school can operate an effective semester plan. However, the larger schools obtain additional benefits for their students in the form of repeat classes and greater program flexibility. Nevertheless, the central principle behind the semester concept is to offer more effective instruction and greater learning. This is achieved through increased frequency of instruction and concentrated instruction. All schools can offer their students this major benefit.

All schools can profit from the increased student motivation that appears to result from the increased immediacy of the goal the condensed type of course offers. All schools can benefit from more effective teaching.

Semester System Disturbs Some Teaching Practices

No major re-structuring of the school year can be achieved without some disruption of familiar practices and techniques. Most teachers usually are concerned about their ability to adjust successfully to the new pace of instruction required by the semester system. Courses cannot be allowed to drift along casually. Within nine weeks of the beginning of a course the half-way point has been reached. Every lesson is important. Tight planning is essential. Excessive teacher absence or slackness can be disastrous for the students. Inessentials must be pruned from all courses.

Competent teachers need not fear these changes. However, there will be little room for the lazy or incompetent. Instruction generally should improve.

Teachers for some time have advocated reduced pupil loads to enable them to get to know their students better as individuals. Such a development is discouraged by the fact that public schools are organized and financed to provide mass instruction. The semester system can distribute students so that the teacher's pupil load at any one time is reduced. However, when both semester loads are combined, the teacher on the semester system will have taught more students during the year than previously.

There appears to be an increase in the actual marking load for the semestered teacher. This increase is usually offset by a decrease in the preparation load. Although greater emphasis must be placed on sound lesson planning, many teachers will teach only two different subjects a semester, and in larger schools they

210 - 10% = 210 - 21 = 189
- 50 cr. cl.
139

will probably teach the same courses in both semesters.

Semester Plan Increases Administrators' Task

The semester system in reality is two mini-years. Therefore administrators are faced with two distinct opening and closing routines each year. Two timetables must be prepared; textbooks must be distributed and collected twice; permanent record cards and other student records must be attended to more often. The increased flexibility of the semester system results in more adjustments to individual student programs. Most concerned administrators are prepared to increase their workload—as are concerned teachers—if such an increase offers substantial advantages to their students.

The Semester and the Extracurricular Program

Many schools operate outstanding extracurricular programs for their students and do not want to see such programs seriously affected. Most extracurricular activities are scheduled before or after school or at noon hour. The semester system does not require any change in a school's opening or closing times, and should not affect the lunch hour. It should therefore have no effect on most extracurricular activities.

Disadvantages of the Semester System

No system is perfect. The semester system has disadvantages as well as advantages. No doubt many advantages and disadvantages remain to be discovered as we become more familiar with the system. However, some mention should be made of the most significant disadvantages and concerns that have already shown themselves.

In a semester system, science labs can be so organized that more students can receive more hours of concentrated instruction

With its increased pace, increased frequency of instruction and concentration of course content, the semester system requires regular attendance by both teacher and student. An instructional week in the semester system can equal two or more weeks in the traditional pattern. In six weeks a third of the course should be completed; in eight to nine weeks the half-way point is reached; and in 12 weeks the course is two-thirds over.

Most semestered schools report a decrease in student absenteeism. Teacher absence can become a serious problem. Unfortunately, even well-directed substitute teachers are not effective replacements for the regular teacher. Excessive teacher absence can be disastrous for the students.

Transfers between schools can be difficult for a student at the best of times. The advent of the semestered school has made this problem more complex. No school can avoid this problem because a significant number of both semestered and non-semestered schools are now operating within the province.

Surprisingly, most semestered schools have not found student transfers the problem they anticipated and most have been able to accommodate mid-year transfers successfully.

Semestering May Cause Gaps in Course Sequence

Some skill courses depend greatly upon successful mastery of skills or information offered in a previous

The semester system should have no effect upon most extracurricular activities because most are scheduled for before or after school or at noon.

course. Can a student afford a seven-month gap between the end of French 9 and the beginning of French 10?

Some research suggests that the greatest period of retention loss occurs in the few weeks immediately following the completion of a course. Will the seven-month break be significantly more serious than the two-month summer gap?

If such extended gaps in course sequence do prove to be significant in retention loss, a school might consider offering such courses in immediate sequence. Is there any valid objection to having a student complete the traditional four or five years of French in three years?

Scholarship Students Suffer

Small and medium-sized schools usually have enough students to offer one class each year in such Grade 12 subjects as French, English literature or physics. Such schools cannot offer all their Grade 12 courses in the second semester, at which time the Departmental scholarship examinations are scheduled. Unfortunately, the Department of Education has resisted all requests to have the scholarship examinations offered twice a year on the same basis as the regular examinations. Students writing for scholarships in courses taken during the first semester must wait five months to write their examinations.

In some schools, concerned senior teachers have tried to overcome this problem by offering additional tuition to scholarship students at noon hour or after school. Obviously, this is not an adequate solution to the problem. Most schools hope the government will not permit a minor administrative inconvenience to some Department of Education officials to deter schools from introducing the semester system.

ADVANTAGES OF THE SEMESTER SYSTEM

1. More effective learning and mastery plus higher student achievement should result from increased frequency of instruction and concentration of instruction.
2. The student's immediate course load at any one time is reduced by half, permitting him to give more attention to those subjects in which he is enrolled.
3. Students appear more motivated by the immediacy of their goals. The end of the course is in sight from the beginning.
4. Semesters provide more scope for student enrichment through more course offerings.
5. Semesters provide greater flexibility for remedial work and repeat classes.
6. The semester system offers greater flexibility in adjusting student programs.
7. The semester system appears to cause a decline in student discipline problems.
8. The semester system improves student attendance habits.
9. The semester system appears to improve instruction as a result of better teacher preparation and the removal of unnecessary trivia.
10. Students change their teachers every five months. This can be helpful if there is a personality clash between the student and the teacher.
11. Teachers get to know their students better because of reduced pupil loads and the increased frequency of meeting the students.
12. The semester system usually permits teachers to concentrate on fewer courses during a weekly cycle.
13. The semester appears to cause a decline in drop-outs and encourages some drop-outs to return to school.
14. The semester system significantly increases the utilization of facilities, equipment and materials.
15. The semester system removes traditional slack periods from the school year and therefore makes more efficient use of the time available.

DISADVANTAGES OF THE SEMESTER SYSTEM

1. Excessive absenteeism by either the student or the teacher can create a most serious problem for the student.
2. There is a significantly increased workload for the administration.
3. Extended gaps between sequence courses may result in greater retention loss.
4. There is an increased marking load for teachers.
5. Student transfers can be more difficult.
6. Scholarship examinations offered only at the end of the second semester discriminate against small and medium-sized schools.
7. Teachers may be discontented with receiving spares in only one semester.

Some Working Conditions Change

No major change can be implemented in any organization without affecting some familiar practices. One such practice is teachers' spare or 'free' periods. Originally free periods resulted from timetable necessities. In time, most secondary school principals tried to build a modest number of 'spares' into the timetable for their teachers.

Semestered schools may experience some difficulty in providing teachers with spares as in the past. If a teacher were assigned one of the four blocks as spares in each semester, he would receive approximately 25% of his time off. Although a sound case can be made for adequate preparation and marking time for teachers, many school boards and taxpayers may object to having teachers teach only four hours daily.

Most semestered schools initially assigned most teachers a block of spares in one semester or the other. This gives a teacher more than 12% of his time free for the year, but all free time is concentrated in one semester. Some teachers have voiced dissatisfaction with this arrangement.

A possible solution to this problem is to team two teachers to one block in each semester. In this way they could spell each other off and obtain spares in both semesters. Such tactics have little educational justification other than contributing to teacher convenience. Nevertheless, teacher morale can and does affect the learning situation and therefore must be considered.

Types of Semester Organization in British Columbia

Although the semester system is still in its infancy in this province, a number of different semester patterns have already appeared.

The most typical model appears to be the one introduced by the Nanaimo District Senior Secondary School. This plan features a rotating four-block semester operating within a four-day cycle with five one-hour periods daily.

Students have the opportunity to take four courses in each semester. Each course is approximately 115

hours long, compared to the 130 hours devoted to English and mathematics and the 104 hours for electives that traditional schools offer. Advocates for the semester system suggest that the more effective learning produced in the semester system more than compensates for the fewer hours of instruction in some subjects. Grade 12 Departmental examination results tend to support this position.

A controversial feature of this type of pattern is that one of the four subjects has a repeat period each day. This repeat period is handled well by some teachers, but some teachers experience difficulty with it. Without good planning, it could degenerate into a study period.

Several senior secondary schools have tried to avoid the repeat period by offering only four 75-minute periods daily. This approach has met with some success, especially in schools that have combined it with the extended day. However, it is not known whether such long periods would be as effective with junior secondary school students.

Several schools have introduced a partial semester system in which some courses are 'semesterized' while such others as French and physical education are offered on a ten-month basis.

Templeton Secondary School in Vancouver has developed an interesting approach that is similiar to some American semester plans. This school offers five different courses each semester instead of four. The teacher still meets all his students each day, but the semester features courses that are only 90 hours long.

Both the junior secondary and senior secondary curricula are treated as single units. English 9 and 10, for example, is offered in three instead of two courses, and a student must take three out of the four semesters in English. Electives, however, receive only 90 hours of instruction.

The Question of Semesters

Many schools in the next year or two will be faced with the decision of whether or not to adopt the semester system. Educational changes have become increasingly suspect by both the public and educators. Change merely for the sake of being different or for cheap publicity is irresponsible. Changes in our schools must be educationally sound. They should offer an opportunity to improve the quality of instruction and learning. Economic considerations are important, but they should be secondary.

The semester system offers a unique situation. It offers an opportunity to make student learning more effective, and at the same time offers the paying public some economy of operation and greater use of school facilities.

The semester system is not perfect, but its advantages appear to outweigh its disadvantages. Its rapid growth, together with its widespread support from a variety of sources, are combining to make the semester system the universal plan of secondary school operation in British Columbia for the 1970s. §

References and bibliography available on request.

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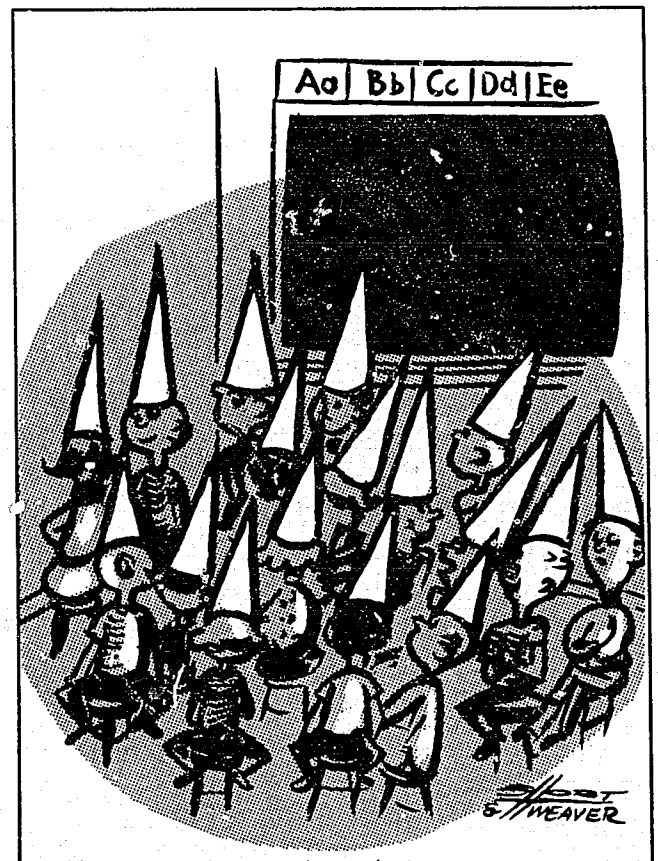
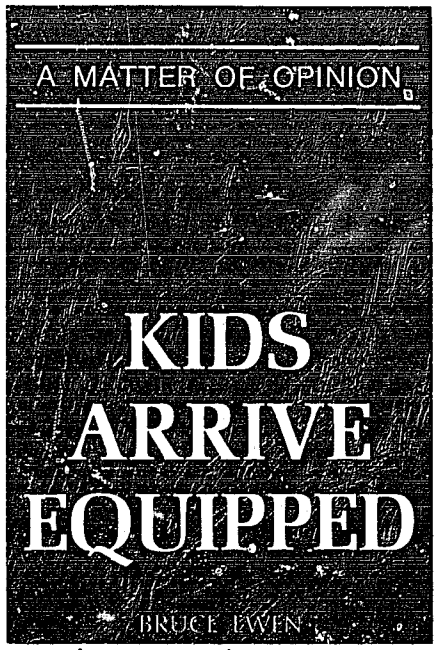


'Mad, isn't she?'



¶The abacus is the most ancient of all computing devices. And they occur in several forms and in all civilizations before the invention of written languages.

It is probable that because he had fingers, man learned to use the idea of numbers, then extended his ability to symbolize numbers with the invention of the abacus. It is remarkable that every human society that can be called civilized, however remote from each other geographically, developed and used some form of abacus independently.

Not long ago I read a beautifully illustrated book on Egyptology. One of the illustrations depicted a king surrounded by his servants, one of whom the caption called 'a musician with a harp-like instrument.' The bumps along the strings must have been frets, I guess, because all the strings were the same length. Surely such a powerful personage would depend more on his accountant than upon his musician—just as he would today.

Abaci are becoming more and more popular for computation every year. The original cash register was a gadget that was activated by pushing little wooden balls into slots at the top, thereby causing numeral-flags to appear, and keeping a total. Later machines substituted buttons and key-bars for the balls and, in this form, became popular as desk calculators. That eighth wonder of the world, the computer, is no more than a proliferation of base-two abaci, which can be stored, brought forward, and placed in specific order, as the programmer wishes.

I use a little abacus manufactured in North Vancouver during the year-end ordeal of balancing my register. It works, for me, just as fast as a desk calculator. It also works in any base you choose, up to base 13. You may have read not long ago of a contest between U.S. military personnel using a computer and Koreans using abaci. The Koreans won—because, unfortunately, it takes time to keyboard a problem into a computer. Yet, many will sneer at the idea of using an abacus, mostly, I think, because we had them in our cradles and on our toys before we were ready to use them.

There are two common forms of abacus. The first has 10 beads on each of its wires. Its use occasioned the invention of our present base-place value system of numerals and it is itself a direct extension of the 10 fingers. This type of abacus has been modified more recently to have only nine beads on each wire (you need nothing to represent zero). As a teaching aid this new form is more useful because it requires the operator to have at his disposal simple identities like 7=10—3, and to know that if he cannot add 7 beads on a wire, he *must* take away three from that wire and add one to the next. The Hindu-Arabic numerals can be seen as a picture of such an abacus.

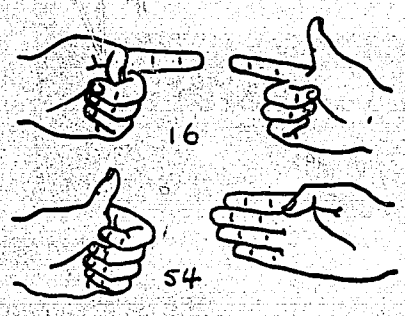
The second form of abacus has seven beads on each wire, but the wires are divided by a bar so that two beads of each wire are in a compartment by themselves. The use of this type requires the operator to have such identities as 7=5+2 freely available to him. Systems of numerals such as the Roman become more rational if considered in relation to using this abacus. Again the numeral is a picture of the abacus. (The Romans did *not* use IV for IIII, IX for VIIII, XL for XXXX. These were sophistications of a later period, the 'Dark Ages' I think they were called. Nor did the Romans permit their students to read CLV as 'cee ell vee.' They read the Latin equivalent of 'one hundred fifty-five.') This type of abacus enjoys widespread use today, especially in the east.

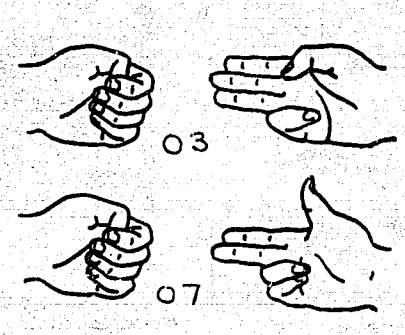
This latter type of abacus has also been modified so that each wire has only five beads, with one bead on each wire separated from the other four by a bar. Efficient use of this abacus requires fluency with both of the kinds of identities mentioned above. In use it is the speediest of all, and can be operated without having to be looked at, because the one bead on each wire corresponds to the thumb and the four beads to the four fingers of one hand.

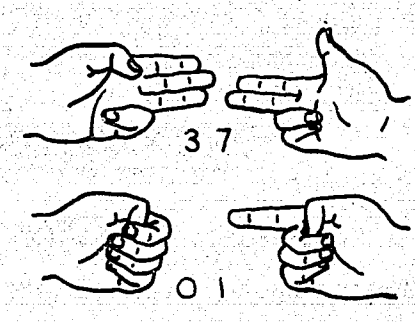
All of which brings me to the point of my story. Every kid arrives at school equipped with an abacus capable of recording up to 99, *and nobody uses this marvelous learning aid*. It can be used to learn counting, simple addition and subtraction, and the idea of place value.

The illustrations by my colleague, Ted Kingan, will show you how.§

Mr. Ewen teaches at Carson Graham Secondary School, North Vancouver.







130 - 5% - 15% = 130 - 6.50 - 12.53 = 104.97

210 - 5% - 15% = 210 - 10.50 - 29.93 = 169.57

ONWARD AND UPWARD . . .

with the literary life, the latest manifestation of which made its initial appearance back-to-back with this page in our first number this year. I refer to the crossword puzzle, naturally. I have long been an addict of this form of mental exercise, and I consider it a most worth-while feature in a magazine, especially a journal like *The BC Teacher*, which sometimes tends to take itself too seriously.

DON'T GET ME WRONG . . .

because crosswords can be very serious indeed. Ever tackle the ones in the *Times* of London, or the *Listener*, or the *Spectator*? These can be fiendishly difficult, particularly to *auslanders* like ourselves. But all of these, including our own anonymously contributed example, are on a much higher level than the usual kind found in most newspapers and puzzle magazines on this continent. For one thing, they make you think. They do not rely on a vocabulary of banal 'crossword' words that crop up with monotonous regularity, and represent arcane or obscure bits of the language that should be mercifully abandoned.

ONE MORE COMMENT . . .

I want to make is that our puzzle was a little too easy. Maybe the next ones will be more challenging. Incidentally, did you notice that there was not one word in it that had to do with education? How refreshing!

—C. D. Nelson

NEW BOOKS

C. D. NELSON

SPECIAL REVIEW

Toward a Breakthrough in Education: A Systems Approach to Educational Productivity, by William G. Manning. M and M Systems Research Ltd., Edmonton, 1970. $2.00

Brilliantly conceived, but tragically executed; promising in expectation, but disappointing in fulfillment; these phrases might be used to describe *Toward a Breakthrough in Education*, written by W. G. Manning, for more than 40 years teacher, counsellor and principal in Saskatchewan and now College of Education lecturer, school board trustee and consultant.

Having cited evidence to support the need for change, Manning examines education—from a 'system perspective'—in terms of a limited supply of social, human and economic resource 'inputs.' After a brief investigation of certain 'outputs,' the author focuses on 11 major processes of the educational system. These range from the well known educational components of aims, curriculum, teachers and students to facilities management, evaluation of output, costs and cost control, and management—components perhaps more readily associated with the business world. Eleven strategies, from clarifying the objectives of the educational system to improving instructional process and from a focus on cost efficiency to the provision of alternative types of school, are then recommended.

The systems perspective should offer a fresh opportunity to explore in depth the purpose and progress of education. One readily applauds the concluding statement, on page 46, that unless schools do adjust to meet the needs of the age, 'other types of institutions will arise to provide the service that society requires, just as trucks and pipelines have displaced to a great degree the unadapting railroads as mass movers of materials.'

But does the monograph really provide a possible means to ensure survival of the school system as a strong, vibrant institution in society? Ignore the fundamental question of the appropriateness of applying the model of the business enterprise to the education enterprise, and still I have major reservations, even though Manning does suggest, on page 45, that the most innovative school in Canada is John Young's Campbell River Senior Secondary School.

Would it not be more realistic, functional and less mechanistic to think of educational 'outputs' in terms of skills (process and motor), facts, concepts and generalizations and attitudes and values that pupils acquire rather than in terms of graduates and non-graduates of different levels of institutions and of custodial services and research? (On page 25, Manning does concede a trend in 'provincial curriculum guides to specify educational outcomes rather than content.')

How helpful is it merely to analyze statistically the composition of all the students and teachers? Rather, what is it that teachers and students do? Manning decries the lack of a theory of instruction, but does not seem to be aware of the fact that, for example, in *The New World of Education* (Allyn and Bacon, Boston, 1970), Marc Belth effectively defines the two quite distinct processes of teaching and learning.

This lack of understanding, together with an obsession for introducing greater efficiency—and certainly, this reviewer would agree with the need for improved efficiency—leads to some strange positions. Consider the following few examples.

1. Page 31—the plea for the master teacher and ETV. If the total audience can be made large enough by combined direct broadcasting and video tape so that the master teacher can talk to tens of thousands of students at one time, he may replace considerable other teaching manpower.
2. Page 30—the concern that teachers 'may spend from a quarter to over half their time on non-teaching tasks.' If this be clerical and custodial tasks, one heartily concurs, but nowhere does Manning suggest the essential threefold stages of instruction—the fact that the pre-active and evaluation stages are as vital as the interactive stage is to the instruction or teaching process.
3. The frequent failure to define the educational output, or the 'increment of learning' that can then be measured to determine the 'productivity' of the teacher, though on page 23, the reader is assured that 'so many teachers are needed because their productivity is low.' Incidentally, no concrete evidence is presented either to substantiate this claim or to define 'low.'
4. Page 8—The surprising practice of devoting only one paragraph to the chief commodity of the school—knowledge.

Repeatedly, Manning wanders into what one would insist are indefensible areas. These include his assumption that education classes are 'easier' than other discipline studies at university (page 10), his constant reference to 'powerful teachers' organizations' that inhibit change and progress, his advocacy of general and subject streaming, his belief in the power of external motivation—examinations and supervision—to goad 'the incompetent or lazy teacher' (page 28), his unfortunate refer-

ence to the army model where 'instruction is largely separated from discipline' (page 43), his equally unfortunate reference to the *National Review* (page 45), and his charge that 'colleges of education train people for administration, but rarely for management' (page 41). (Later, however, management is defined as 'planned and organized leadership' (page 43), and the vital importance of 'participative management' is acknowledged.)

As in many publications, there are a few errors. Student rioters destroyed the computer at Sir George Williams University, Montreal, in February 1969, not in 1968 (page 1). Teacher education was established at the University of British Columbia long before the 1930s (page 21). Reference is frequently made to 'North America,' and on page 42 a specific reference is made to the 'technological society that exists in North America.' However, in each reference to 'North America,' it is obvious that the reference should have been to Canada and the United States alone.

This monograph largely ignores consideration of the unique interests and needs of each pupil. Should not the school encourage the qualities of curiosity, open-mindedness, skepticism, suspended judgment, respect for accuracy and precision in each pupil? Should not the school serve as an essential link in making our society a little more humane and concerned for all its members? Should there not be some consideration of the fact that teaching cannot be equated with learning?

The reader will search the pages in vain for any evidence of understanding of or answers to such questions as these. In fact, until we are willing to face these fundamental questions, and to consider education as a discrete discipline, 'A Breakthrough in Education' will continue to elude us.

—John S. Church

BIOLOGY

An Outline of Principles of Genetics, by Arthur Portland. Forum House, Toronto, 1969. $1.75 (paperback)

This outline of genetics makes a useful and welcome addition to a secondary school science reference shelf. It is recommended for teachers of Science 10.

In clear, concise language it traces the historical development of genetics, beginning with the formulation of the Cell Theory. The more detailed aspects of genetics are covered by a masterful perusal of research work from Mendel to Watson and Crick. A partial list of topics includes Mendelian genetics, meiosis, linkage, translocation, nucleic acids and genetic code, protein chemistry and synthesis, mutation, and developmental and population genetics.

The author states concepts and ideas in a matter-of-fact manner and the book is refreshingly free from philosophical meanderings.

Illustrations include diagrams, graphs, tables and chemical formulae where necessary for elucidation. The need for a glossary is obviated by the self-explanatory text. There is no index, but the comprehensive table of contents permits the location of desired topics.

In short, this little volume is an extremely good example of the compact type of handbook that should predominate on a teacher's bookshelf.—D. A. Arnott

FOLKLORE

Winter's Eve and *Christmas Folk*, by Natalia Belting. Holt, Rinehart and Winston, Toronto, 1969. $5.50 each

Natalia Belting's talents are misplaced in these two books designed for young children. The vocabulary is too difficult for a child interested in picture books; the stories are written in blank verse; and many of the lines have connotations that are beyond the understanding of elementary school children. These things, combined with some rather arcane expressions, such as 'flail agane,' 'cruses of grease' and 'dulcimer plucks,' are suitable only for a most sophisticated young student.

Of the two, *Christmas Folk* is the one that may be understood best. It tells about the traditions and folklore of Christmas during the first Elizabethan period. It could reasonably be a second purchase for the library, but is not basic.

Winter's Eve is far too difficult for use by an elementary pupil. It concerns the spells and evils of the time leading to Halloween, and of the traditional English festivities held to ward off the spirits of winter's evil days. The illustrations in both books do much to create the appropriate moods.

As poetry is meant to be read aloud, these books would be suitable fare for oral presentation. They are well-written tales and, if they were included in an anthology or similar collection of poetry, would be far less expensive and more attractive.

—Kenneth R. Connelly

MENTAL HEALTH

Sunday's Child; how to bring up a mentally healthy child, by Michael Miller. Holt, Rinehart and Winston, Toronto, 1968. $5.70

This book, written by a practising psychiatrist, is an earnest attempt to give guidance to parents on raising emotionally healthy children. The author tries to show how easy it is to instill emotional instability in children, with subsequent harmful results. He uses case histories to illustrate specific problems, but, since they are case histories, these illustrations tend to be extremes that could probably make the parent overanxious.

What Dr. Miller has to say is very worthwhile, and this could be an excellent resource book for a secondary school class in child care or for PTA discussion groups, where the examples can be recognized as extremes and not norms.

—Pamela C. Harder

POETRY

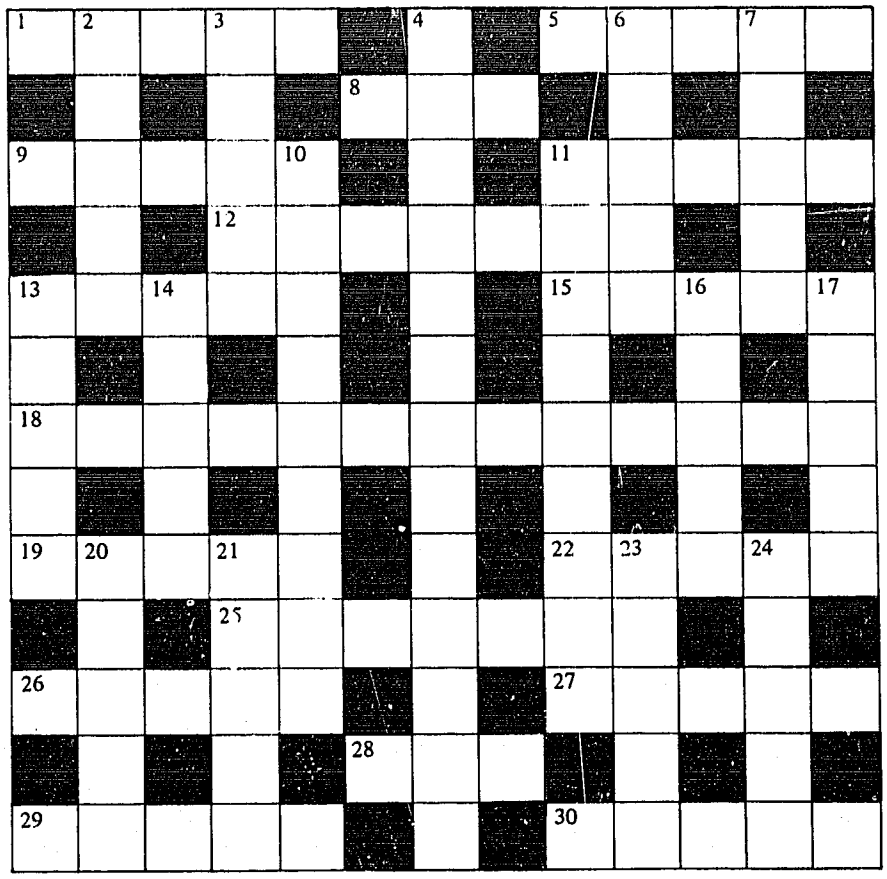
Thumbprints. Ed. Doug Fetherling. Peter Matrin Associates, c1969. $2.25 paperback

Poetry anthologies are generally depressing. Most of the time they represent an attempt to collect, in a tidy way, all the best poets of a particular school, group or nation. They are often useful in giving a sweeping or overall view of what is happening or has happened in a particular time or place. They are, however, seldom delightful; very few people 'curl up' on a winter's eve with an anthology of poetry. Unfortunately, students are generally presented with a collection of poetry for their initial experience with this literary form. As mentioned before, a good anthology can be useful for a scholar, or for a person who has already developed an interest in poetry. But for one who is encountering poetry for the first time an anthology can be deadly. This is because, for the most part, the poetry itself is subordinated to the objectives of the editors—be it a chronological array or an overview of a school of poetry or group of poets. It is true that some collections used in schools present poetry using a thematic organization, but here again the poetry is subordinate to the 'theme,' and often poems are trimmed to fit this theme.

In Doug Fetherling's anthology *Thumbprints*, however, one feels certain that here is a collection whose theme or purpose was generated *by the poems*. Here is a collection that could be used in the schools and with which students could identify; a collection they *may* want to 'curl up' with on a winter's eve. Fetherling's introduction does an excellent job of setting the tone for the poems. Very simply he puts the poems where they belong—on the road with the trans-Canadian kids. The brief biographies of the poets contain enough information to give one an understanding of the individual writers.

Thumbprints is not schoolish, pedantic or didactic. It is simply a collection of hitchhiking poems written by a variety of Canadian poets—some well established and others from 'hip' or underground scenes. And this is what could make *Thumbprints* an excellent book to use in the schools. The poems are delightful and fresh, some pure fun and some profound. There are ideas and insights. At the same time the collection, almost accidentally, contains enough scope that it could serve as a useful starting point for more intensive study of modern Canadian poetry. Raymond Souster and Al Purdy were involved in the Montreal scene of the 1940s when modern Canadian poetry really began to gain impetus. Margaret Atwood, John Newlove, George Bowering and George Jonas are representative of a group who have recently become established poets. And Bill Bisset, David McFadden and B. P. Nichol are some of the poets who are just beginning to gain recognition.

—Jim Southward



CLUES ACROSS

1. Epics (anagram) (5)
5. Ted and Al got together and distributed the cards (5)
8. A piece of parchment paper (3)
9. Animal in Edgar Rice Burroughs' 'Tarzan' (5)
11. Origin of the mooring-place, we hear (5)
12. Rig chap differently and get a vivid result (7)
13. Commanding officer in charge of one thousand inside (5)
15. Real's changed for the machine to amplify light waves (5)
18. Toes in command (anagram) (13)
19. Pleasure boat from Cathay—but lacking an article (5)
22. Backward fur takes you and me for this man (5)
25. A drama's recast for the flotillas (7)
26. A changed Rita—as a result of getting the jeweled headpiece? (5)
27. Slowly let on (5)
28. One from a brace of ducks . . . (3)
29. . . . and teals can be lowest in value (5)
30. Advantageous seats awry (5)

CLUES DOWN

2. Lot up for grabs — on the distant planet? (5)
3. Welsh breed of dog from the decor gingerly applied (5)
4. Drop race, Penny, and get greater power (13)
6. Care I take in order to obtain a heath plant (5)
7. Machine contained in the flat he inhabits? (5)
10. Musical group in which her actors are confused (9)
11. Liberal at variance produces a two-sided effect (9)
13. Self-assured—like the rooster! (5)
14. 2102 for the copier (5)
16. Make fun of part of the disc-offering (5)
17. You can get sores — and pricks — from these! (5)
20. Raise a change and get up (5)
21. Injures when marsh opens up (5)
23. Ruses made up to upset employers (5)
24. The tune I compose differently to disunite (5)

Answers for last month's puzzle

ACROSS

4. Fiascos
8. Ago
9. Total
10. Realm
11. Ruled
13. Escapee
16. Daydreams
18. Debatable
23. Isolate
24. Leads
25. Trial
26. Water
27. Eve
28. Creator

DOWN

1. Paternalistic
2. Untold
3. Malady
4. Folder
5. Africa
6. Cramps
7. Summer resorts
12. Easel
14. Seta
15. Ample
17. Drat
18. Docile
19. Ballet
20. Tender
21. Blower
22. Easter

$ 165

NFB
PRODUCTIONS

¶Ever since, in a small New York theater six years ago, a hazy-colored salmon spawned on the screen in front of me while a middle-aged lady yawned in the seat beside me with yawns that had a cracking sound to them, I have been a fan of the National Film Board of Canada.

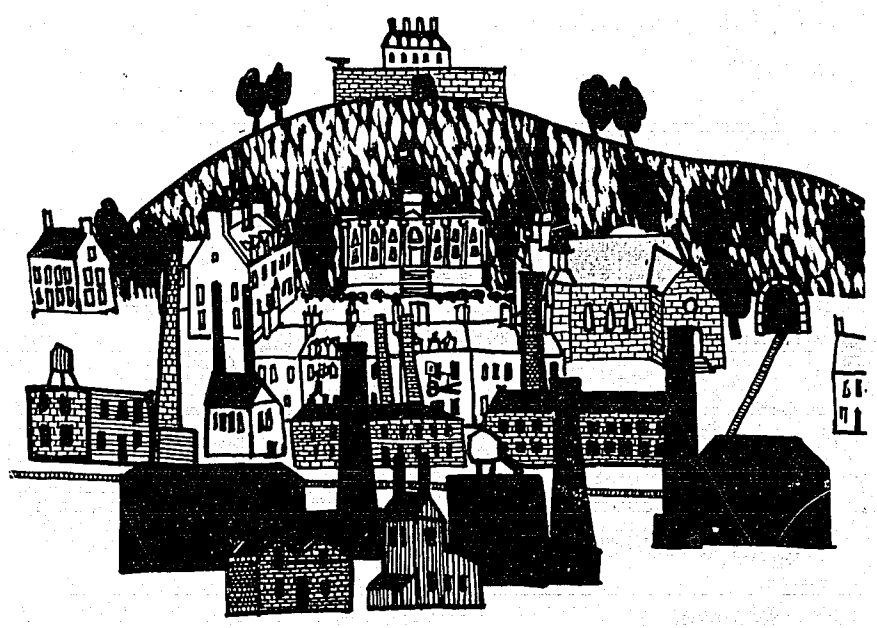
At the time I knew little about this country, but I thought that the Canadian youngsters were a lucky lot, not being regularly subjected to the products of the so-called commercial film-makers their American counterparts had to put up with.

There is no formula to the NFB movies, and that's probably their most refreshing quality. There are no final reiterations of important points with sound and large print especially designed for the backward idiots, no closeups of 50 spears to give the idea of vast numbers in Caesar's legions.

In the next few months I should like to mention a few flicks from the NFB, none of them over three years old. They weren't all superb. Some were downright bad, but most constituted attempts at new approaches to well-known themes. In this day of the gleichsschaltung of the screen, that's certainly refreshing.

First I speak to the science types.

Physics: An Interactive Approach (13 minutes 55 seconds, color) was an attempt to show the bright new way that kids should learn science by doing and experimenting themselves, rather than by being told from the front of the room. Two of my scientific colleagues watched the screening, remained unenthusiastic, said the film might be useful for teacher training institutions. I have my doubts. It's repetitious. All it says could be said in much shorter time. Definitely not among the best training films.



Boomsville—*No real concern about city planning, but there should be.*

DNA (10 minutes 40 seconds, color) stands for dioxyribonucleic acid. (Didn't you know that?) I was fascinated by it, although I understood very little. But that's not the fault of the picture, which presupposes a certain background in biology. The way those amino acids combined to produce proteins was simply smashing. No kidding, I mean it. Aside from the scientific aspect, there was high-caliber cinematography involved, with dramatically lighted molecule models and

well done and well colored animation. I'd recommend *DNA* not only to the science department, but also to the art people.

For the social studies department there is *Pathways in the Sky* (17 minutes 13 seconds, color), made for the Department of Transport. It starts away back with Icarus and the non-flying Greeks, then seems to concentrate on parachutists and glider pilots, until it becomes apparent that the object is to show the various ways one keeps his feet off the ground.

From the Red Baron's biplane (complete with dual machine guns) to scenes showing the supersonic transport prototype there is plenty of interesting footage, much of it shot at the Abbotsford Air Show. The most surprising statistic quoted states that 30,000 Canadians become airborne daily. That makes about one-half of the total population going up in the air annually.

For the lower grades try *Boomsville* (10 minutes 12 seconds, color). It's a sort-of-amusing wrap-up aid, maybe for the warm June days, when most kids already have one toe into their favorite body of water. Jacques Cartier starts the ball rolling and by the time the suburbanites take over, the point is well made.

Buildings superimpose themselves upon the countryside, immigrants pour into the scene from a ship at the dock, railroad tracks crisscross, smokestacks multiply, cars honk. The point is made: there is no real concern about city planning. It's equally obvious that there should be.

There is an unusual twist to *The Oshawa Kid* (24 minutes 3 seconds, color) in that the narrator is a woman. But the originality doesn't stop there. Although this story deals with Sam McLaughlin, the Canadian car manufacturer, much of the footage has been shot on his Bermuda estate. McLaughlin puts forward such a relaxed and—for a man in his late 90s—such a lucid story of this distinctly Canadian enterprise that one can see how the picture could have been shot in the middle of Gobi desert if Sam had happened to own a pad there.

If you are discussing American ownership of Canadian industry, this is an indispensable lesson aid. Because not only did Sam make a deal with a General Motors president on the most friendly terms, but also his brother decided to go into the soft drink business and founded a firm whose name was to become the synonym for this country's ruthless incursion into the American economy. It was called the Canada Dry Company.

The lingering shots of car junkyards are underscored by a question softly asked by the narrator: Was it worth it? Was the famous McLaughlin Buick meant to develop into this? Sam doesn't answer. Maybe he wasn't meant to hear the question.

But his father would surely have answered without a moment's hesitation. Because, as young Sam tells it from that green lawn in Bermuda, the old man was a proud carriage-maker. He was dead set against his son's tomfoolery with these here motor engines.

Maybe the old man was the smartest McLaughlin of them all. §

MATERIALS RECEIVED IN BCTF RESOURCES CENTER

(All materials available on loan—by mail or in person. Resources Center hours: Mon.-Fri. 9-5; Sat. 9-1.)

DRUGS AND THE SCHOOLS, by Michael Roe. Toronto, Canadian Education Association, 1970.

DRUGS: FACTS ON THEIR USE AND ABUSE, by N. W. Houser. Chicago, Scott, Foresman, 1969.

ELEMENTARY SCHOOL SOCIAL STUDIES, by Maxine Dunfee. Washington, Association for Supervision and Curriculum Development, 1970.

INSTRUCTIONAL MATERIALS CENTERS, by N. P. Pearson. Minneapolis, Burgess, 1969.

THE INTEGRATED DAY IN THE PRIMARY SCHOOL, by M. E. Brown. New York, Agathon, 1969.

THE MANAGEMENT OF EDUCATION, by S. Umans. New York, Doubleday, 1970.

MANUAL FOR UTILIZATION OF AUXILIARY SCHOOL PERSONNEL. New York, Board of Education for the City of New York, 1970.

MEDIA FOR DISCOVERY, by Hans Moller. Toronto, MacLean-Hunter, 1970.

SCHOOL LEARNING: AN INTRODUCTION TO EDUCATIONAL PSYCHOLOGY, by David P. Ausubel. New York, Holt, Rinehart and Winston, 1969.

SIMULATION AND GAMING IN EDUCATION, by P. J. Tansey and D. Unwin. London, Methuen, 1969.

THE STUDENT AND THE SYSTEM, edited by Bruce Rusk. Toronto, Ontario Institute for Studies in Education, 1969.

TOWARD PERFECTION IN LEARNING, edited by C. M. Campbell. Midland, Mich., Pendell, 1969.

THE EDITOR COMMENTS — K. M. AITCHISON

A MATTER OF HUMAN RIGHTS

¶An increasingly important concern to most people these days is protecting the rights of the individual. Some rights are protected by statute, and the courts have been ever vigilant to ensure that people were not deprived of rights covered by law. In addition, Canadian courts have been recognizing to an ever-increasing extent that there are basic human rights that apply to all people, whether or not covered by statute law—a 'natural justice' over and above rights accorded by statute.

One of these basic rights is the right to a hearing *before* an action is taken, with all that a hearing entails—the right to know what is alleged, the right to hear and to controvert evidence on which the allegation is based, and the right of representation at the hearing.

Yet not a single teacher in our province has the right to a hearing before dismissal action is taken against him. Teachers on permanent staff may appeal a dismissal *after* a decision is made to suspend, dismiss or transfer him. The probationary teacher has no tenure rights at all.

An excellent guide to fair practice in tenure matters exists in a UNESCO document adopted in 1966 by a special inter-governmental conference on the status of teachers. Canada was one of the countries that approved the document. The document would guarantee to *every* teacher certain basic rights in tenure matters:

1. the right to be informed in writing of the allegations and the grounds for them;
2. the right to full access to the evidence in the case;
3. the right to defend himself and to be defended by a representative of his choice, adequate time being given to the teacher for the preparation of his defence;
4. the right to be informed in writing of the decisions reached and the reasons for them;
5. the right to appeal to clearly designated competent authorities or bodies.

Dealing with probationary teachers, the document says: 'A probationary period on entry to teaching should be recognized both by teachers and by employers as the opportunity for the encouragement and helpful initiation of the entrant and for the establishment and maintenance of proper professional standards as well as the teacher's own development of his practical teaching proficiency. The normal duration of probation should be known in advance and the conditions for its satisfactory completion should be strictly related to professional competence. *If the teacher is failing to complete his probation satisfactorily, he should be informed of the reasons and should have the right to make representations.*' (Italics ours)

The BCTF has suggested to the provincial government that all teachers—probationers and permanent staff alike—be given the right to a hearing prior to a termination or transfer action. The proposal may be opposed by some school boards and district superintendents who feel that it is almost impossible to dismiss a teacher for any reason short of gross misconduct or gross inefficiency. We suggest that difficulty is more imagined than real. More teachers lose than win appeal cases that go to Boards of Reference. The difficulty is psychological, not legal.

A hearing prior to action would probably ease, if not remove, the psychological block to dismissal. It is more humane, and therefore psychologically easier, to call a person's competence into question, to grant him a hearing where the whole question of competence can be reviewed and adjudicated through pro and con evidence, than it is to dismiss him outright with the provision that he can appeal.

When school boards and district superintendents have found appeal proceedings unpleasant, the procedures leading up to the dismissal have probably been questionable. Any faulty or questionable procedures would be exposed during a hearing. Indeed, the right to a hearing would in itself put pressure on administrators to follow defensible procedures. At the same time there would be a real pressure on borderline teachers to improve their competence.

No one wants incompetent teachers, but it is inevitable that there will be some, particularly when the profession has no control over who becomes a teacher. Incompetents must be weeded out, therefore, but even the incompetent is entitled to due process, to natural justice. The right of the individual to fair treatment is all-important, regardless of who that individual may be.

The Government of Canada recognized in 1966 that teachers should have basic human rights. It's time the Government of British Columbia did so too. §

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