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## HAVE A HAPPY JACKIE!

Jackie Sandy, counsellor extraordinaire, active V.I.A. member and Shop Steward, advocate for handicapped training and program initiator for female involvement in non-traditional vocational programs, is leaving the V.V.I. on 1983 August 13 for a year's leave. She and her husband, Jerry, will be in the south of France while Jerry is completing his sabbatical from U.B.C.

Good luck, relax, enjoy, and for those who have fond memories of Aux-en-Province, be prepared for good wine and friendly encounters.

All faculty and staff are invited to a farewell coffee party for Jackie Sandy on Monday, 1984 August 13, at 14:30 in the Assembly Hall (Room 240).

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#### AUTO DOCTOR

Do you have car problems? Perhaps the Auto Mechanics Department at King Edward Campus can be of help. There are some limitations, however, since the work nature must benefit students and be of the type they need experience on; domestic and popular foreign makes are preferred; the type of repairs may dictate how quickly your request can be accommodated. Give us a call at 875-8202.

## LIBRARY ACQUISITIONS

The following materials are now available in the Library:

Information Processing Compendium of Pharmaceuticals and Specialties 1984 The New Office Etiquette The World of Learning 1982/83

JOB OPPORTUNITIES

# VCC-VANCOUVER VOCATIONAL INSTITUTE

VVI - Department Head - Power Engineering - Apply in writing by 1984 October 12.

Ministry of Education Coordinators \$32,232 - \$36,336 Competition H84:819-01 - Construction Programs Competition H84:820-01 - Mechanical & Fabrications Programs

Apply in writing by 1984 August 22 to Public Service Commission, 544 Michigan Street, Victoria, B.C. V8V 1S3



INDUSTRY SPEAKS TO TWO-YEAR COLLEGES ABOUT HIGH TECHNOLOGY, by James P. Long

Staying up-to-date in post-secondary occupational education these days means high technology.

When the 32 member colleges of the National Post-secondary Alliance set high technology as their theme and focus for 1982/83, their Alliance director was put on the spot. His challenge -- how to help a consortium of colleges, spread out from Alaska to Florida and from Texas to Illinois, revitalize themselves and their technical training programs to suit current and future high technology industry employment needs.

The answer was a series of seven regional two-day conferences during which industry leaders spoke, and college administrators listened. Industry representatives gladly agreed to participate. More than 40 companies became involved. They included: Control Data, IBM, General Motors, Bell Laboratories, Rockwell International, Motorola, Cincinnati Milacron, Westinghouse, Martin-Marietta, Bendix, Sony, International Laser Systems, Western Electric, Texas Instruments, Bechtel, United Technologies, Sandoz, Fermilab, Mead and others.

Industry was asked to respond to two basic questions:

(1) What does your company do using high technology?

and

(2) What can colleges do to prepare students for jobs in companies like yours?

The seven conferences were filled with terms such as robotics, CAD/CAM, lasers, fiber optics, electronics, telecommunications, biomedical engineering, mircroprocessors, videodiscs, and micro-computers. Each speaker was given approximately one hour; question and answer sessions lasted another hour to provide for in-depth understanding. Conferences were held in Dallas, Texas; Nelsonville, Ohio; Chicago, Illinois; Saddlebrook, New Jersey; Orlando, Florida; Oakland, California; and Greensboro, North Carolina. Approximately 800 college leaders attended.

Here are some of the things learned from industry during these national conferences on high technology. What follows is a brief list of twelve straight-forward conclusions about what was learned. These conclusions are necessarily over-simplified, but they do represent the best thinking of the experts who spoke. Statements are not attributed to any specific expert or any specific company, but it's not important to do so. The statements stand on their own merits. Here is one person's interpretation of the twelve most important things learned from the seven high-technology conferences.

1. <u>INDUSTRY IS INTO HIGH-TECH TRAINING</u> -- Industry has now entered the field of education in a big way to train people for high-technology jobs. Why? Because it is not satisifed with the performance of many people we train -- even though we're the professional educators. In the process, industry often makes a profit or at least saves money by doing its own training. Industry will soon be a major force in competition with colleges for students in high-technology education.

- 2. <u>COMPUTERS ARE AT THE CORE</u> -- Computers are at the core of all high-technology fields. Microprocessors chips are being used everywhere and are revolutionizing manufacturing, communications, entertainment, and service occupations.
- 3. NOT EVERYONE NEEDS TO KNOW PROGRAMMING -- Not everyone will need to know computer programming, but it's hard to imagine an occupation that will not soon require some keyboarding skills without excessive computer phobia. Personal computers and telephone modems are now commonplace.

PROGRAMMING JOBS WILL INCREASE DRAMATICALLY -- Although not everyone will need to know programming, the number of programming jobs will increase dramatically. Despite high unemployment overall, one-quarter of a million good programmers could find jobs this year, and that figure will rise to nearly one million a year by 1990.

- 5. <u>NO PHARMACEUTICAL/BIOMEDICAL TECHNICIANS</u> -- A negative signal came to us from the pharmaceutical and bio-medical engineering fields. The two-year technician doesn't fit in so well here, it appears. Granted that hospitals will continue to employ x-ray and lab technicians, as well as nurses for awhile, yet the medical/health field will not add a large number of jobs for two year college graduates as a result of high technology. Any large growth will be in professional, not paraprofessional jobs.
- 6. <u>ROBOTICS HAS COME OF AGE</u> -- Robotics has finally come of age in industry after nearly 30 years of struggling to be born. Robots are not just a fad; they will take over many dirty, dangerous, repetitive jobs, and they will, in the process, create an equal number of new jobs needed to program, maintain, and design robots. The reprogrammable robot will make it economically feasible to manufacture more specialty products in small amounts.
- 7. <u>NO MORE DRAFTING TABLES</u> -- CAD is in the process of revolutionizing drafting, design, and engineering jobs. Don't buy stock in companies that make drafting tables. The CAD system will soon do the T-square and other drafting tools what the calculator did to the slide rule. Training for drafters, designers, and engineers will still include some board experience, but it must also provide some computer-assisted equipment experiences.
- 8. <u>SEMI-CONDUCTORS ARE STILL HOT</u> -- The semi-conductor industry is still "hot". As more chips with larger memories are demanded, the industry will continue to search for ways to turn silicon sand into random access memory devices and mass produce them at low cost. Many technical jobs will be created to design, manufacture, and test semi-conductor devices.
- 9. <u>PROPRIETARY (PRIVATE) SCHOOLS DO IT BETTER</u> -- The electronics industry is frequently disappointed with the graduates of two-year colleges compared to the graduates of six-month proprietary schools. The challenge to upgrade college faculty and equipment in electronics is vitally important.

- 10. <u>COMMUNICATIONS IS EXPLODING</u> -- The communications industry is growing and changing rapidly. Wires and cables for transporting sound and pictures have begun to yield to microwaves, optical fibres, and satellites. We can now make personal telephone calls from commercial planes in flight. The microprocessor chip is making possible so many innovations that few telecommunications jobs of five years ago will be in existence five years from now. There will be many openings for technicians in the communications field. Perhaps a new program should be designed and offered in communications technology.
- 11. <u>AEROSPACE AND MILITARY LEAD THE WAY</u> -- The aerospace industry, especially the military portion of it, is setting trends and creating innovations in the use of lasers, computers, CAD/CAM robots, and also in the training and development of its employess through videodisc and other interactive, computer assisted, television-mediated learning systems. The military has become a first-rate technical educator.
- 12. SOFTWARE IS IN A PREDICAMENT -- The software industry is in a predicament. Programming the required user-friendly software takes a great deal of time and consequently a great deal of money. The costs of development are difficult to recover from sales when product demand changes almost daily. Eventually, there will be some major breakthroughs to allow users to interface directly with computers through high level languages and even through the spoken word. The development of such systems will eventually reduce the demand for programmers, although this won't happen until after the turn of the century. In the meantime everyone is "passing the buck" about who should develop software. The hardware manufacturers want users to spend thousands of hours creating a program, then trade it for a new printer.

The publishing houses are afraid to invest the necessary money into anything so "soft" since all their experience is in "hard" copy. Educators don't have in place a viable reward system for software development. Professors get tenure if they publish a book, but no university reward for inventing a new Visicalc.

These twelve conclusions, opinions, predictions, or suggestions just listed are the significant ideas given by industry leaders to college administrators during a series of national conferences on high technology.

#### NOTE:

DR. JAMES P. LONG DIRECTS THE NATIONAL POST-SECONDARY ALLIANCE, A NATIONWIDE CONSORTIUM OF COMMUNITY AND TECHNICAL COLLEGES INTERESTED IN STAYING ON THE CUTTING EDGE OF POST-SECONDARY OCCUPATIONAL EDUCATION THROUGH COOPERATIVE OFFSETS.

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