A SURVEY OF STUDENTS AT THE COMMUNITY VOCATIONAL CENTRE, SLAVE LAKE, ALBERTA TO DETERMINE RELEVANCY OF THE MICROCOMPUTER TO REQUIRED JOB SKILLS

by

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CHAPTER 1

INTRODUCTION

The microcomputer is playing a significant role in many individual's lives. It has become so significant that business teachers are expected to be familiar with and use the microcomputer. Students know they must be looking for ways to become computer literate or face problems of coping in today's society.

The next problem is to define "computer literacy" in order to make sure we are all talking about the same thing. Roger W. Haigh summed this up well:

> The term "computer literacy" has become de rigeur among avant garde educators and public officials. Despite its frequent use, however, computer literacy remains an amorphous concept. Let me define computer literacy as that compendium of knowledge and skill which ordinary, educated people need to have about computers in order to function effectively at work and in their private lives in American society for the remainder of this century. (1985:161)

As the business world plays such a dominant role in the life of every individual, it is important that business education supply the computer literacy needed by all students. It is important to look at what students think is needed in the business world, what business education is actually teaching, and do students have what is needed when they are actually out in the work force.

STATEMENT OF THE PROBLEM

The purpose of this study is to survey students in the secretarial department of the Community Vocational Centre, Slave Lake, to determine the students' assessment of the relevancy of the microcomputer to their curriculum.

SPECIFIC QUESTIONS TO BE ASKED

Pre-Test Questionnaire

1. Do the students think computer literacy is important to have a place in the curriculum?
2. Do the students feel they will need computer skills in the future?

Post-Test Questionnaire

3. Did the introduction of microcomputers meet the students' perceived needs?
4. Will the software used be somewhat compatible with software that will be used in the job market?
5. Do the students feel that the business courses are organized around the major occupational areas?

Work Experience Questionnaire

6. Did the students find the business courses taught at the post-secondary institution up-to-date and beneficial to the job situation?

NEED FOR THE STUDY

This study is important because one of the most frequently voiced objections to business education is that there is a great deal of difference between what is taught in the classroom and what is actually going on in the business world. It begins with the students' perception of the competitive employment market they will be entering after graduation. Do the students have an accurate picture of the technology in the ever changing job market, and do they understand the extent of the competition they will encounter in the employment market? Then, it is necessary to look at the business curriculum to see if it is broad and flexible enough to provide the students with the needed business skills. Yet, it is significant that what is taught has a priority in mind.

> The business educator may be experiencing problems or desire to improve efficiency in typewriting, shorthand, general business, classroom management, or some other function. Unless microcomputers are purchased to solve specific, identifiable problems, you are apt to end up with an expensive toy. (Campbell, 1982:90)

In order to properly use computers, instructors must realize that "teachers will need to learn a whole new vocabulary to go along with the new equipment. Simply stated, teachers must become computer literate." (McKay, 1984:35)

LIMITATIONS OF THE STUDY

The published material reviewed for this study was limited to literature related to computer applications in business education. The research data collected were limited to information obtained from the secretarial science students in the one-year secretarial studies program at the Slave Lake Community Vocational Centre.

This study is further limited to the responses of the individuals who returned completed questionnaires, and the results are applicable only to the population surveyed.

DEFINITION OF TERMS

The following definition of terms are presented to assist the reader to understand the intent of the researcher. The definitions have been drawn from a number of sources and are commonly accepted.

CAI

Computer Assisted Instruction - the computer is utilized as an audio-visual tool by the instructor. For example a use would be simulations. (Muscat, 1980:10)

CMI

Computer Managed Instruction - the computer is utilized by the instructor as the classroom manager for keeping student records, generating tests, doing correspondence and similar activities, Students are not using the computer. (Muscat, 1980:10)

Computer Literacy

Compendium of knowledge and skill that ordinary educated people need to have about computers in order to function effectively at work and in their private lives. (Haigh, 1985:161)

Data Processing
Operating programs to compile information and preform specific tasks. (Curley, 1984:15)

Word Processing
To edit and format documents such as correspondence and manuscripts. (Curley, 1984:15)

CHAPTER II

REVIEW OF RELATED LITERATURE

INTRODUCTION

The purpose of this chapter is to review literature discussing the use of microcomputers in the business education classroom. Studies and literature relevant to the writer's study were examined and some of the more significant findings and conclusions are presented in this chapter. There is an abundance of literature on this topic, and it was possible to find current, up-to-date research.

The chapter is divided into the following sections:

1. Justification for the Use of Microcomputers
2. Microcomputers as an Assistant
3. Limitations of the Microcomputer
4. Training Requirements
5. Microcomputers in Business Education
6. Integrating Microcomputers into the Business Education Program.

From these studies the investigator wanted to gain a clear understanding of the use of microcomputers, not only in the classroom but in the business world. Then by studying the student population, it would be possible to

see what their views of the uses of microcomputers are and if what they viewed as necessary (pre-test) was the same as what is being taught (post-test) to the actual office-orientated experiences (work - experience test.)

JUSTIFICATION FOR USE OF MICROCOMPUTERS

There is a growing awareness that the economic growth of the country is dependent on the quality of the work force. The human capital, which is defined as the knowledge, skill and dexterity of the population, is the critical factor for our economic growth and well-being.(Haigh, 1985:161) The primary institutions for developing our human capital are the colleges and universities. Therefore, it is very important that these institutions are aware of the changes that are occurring in today's work force.

According to D'Abrosca,

> Computer literacy has become the fourth basic skill added to reading, writing, and arithmetic. Business educators have a responsibility to integrate microcomputer concepts into business education courses as well as to help students master the operations of the microcomputer with hands-on training. (1982,47)

All research emphasizes the need for students to become computer literate. There is a growing need for the business educator to prepare the student for effective participation in the new technological workplace.

MICROCOMPUTERS AS AN ASSISTANT

As well as being used to help prepare the student for a job, the microcomputer is also a useful teaching tool. The microcomputer can enhance the flexibility of the curriculum by offering students tailor-made programs to meet their interests and occupational needs. It can be used to give tutorial lessons which introduce a topic, give the students practice using the concept, and a chance to explore on their own as well as provide drill and practice follow up. This is especially advantageous where only one or a few students are interested in one area of study and a full course of instruction is not feasible. This would also satisfy the problem of students feeling they were not adequately prepared to make a career decision. By the use of instructional software materials in job-related fields a student can try different occupations to see the one he/she enjoys the most. A follow-up program with work experience programs would provide a solid foundation in the field.

Another functional way a microcomputer can be used as a teaching tool is in educational computer application programs that help in remedial skills. Students who have weak areas, for example, in spelling or understanding main ideas, can obtain help outside of class hours and improve their deficiencies without suffering damage to their sometimes low self-esteem.

Computers can also be used to provide drill and practice which is so time consuming but necessary. A program can provide endless examples, and it never gets impatient. This also allows students to work at their own rate with the incentive of being able to explore occupational or other educational programs. They are learning and becoming more computer literate after they have mastered the required basic concepts.

In addition, microcomputers can serve as a paraprofessional aide by helping the instructor keep records, correct repetitious drills, monitor student progress, decrease paperwork, and generally improve efficiency in classroom management. A computer can provide immediate and consistent feedback with complete impartiality.

LIMITATIONS OF THE MICROCOMPUTER

Although the computer can be used as an effective tool in learning situations, it does however, have a number of limitations. This does not mean that because of these limitations, it is necessary to scrap the use of these useful machines - it just means to be aware of these problems, understand these problems and be able to work around these problems.

Walker (1984:4) lists seven problems he believes are the most serious limitations to the microcomputer of today.

1. Microcomputers can supplement conventional education but they cannot substitute for it.

2. Today's microcomputers are hard to use, and teachers prepared to use them are in short supply.

3. New products and systems are being created and marketed in such profusion, with such speed, and with so little standardization that systematic, long-term planning is nearly impossible.

4. Good programs are scarce because creating them is difficult, time-consuming, and expensive.

5. We are only beginning to understand how to use microcomputers in education; therefore, it is easy for a school or teacher to err, look foolish, or do harm.

6. Programs for teaching explicit, formal models can be created readily with known techniques, but it is much more difficult to use computers to teach subject matter that involves judgment, intuition, improvisation,and creativity.

7. Microcomputers will not solve (and may aggravate) several of the most serious current problems confronting education--notably equity, school finance, and divergent public expectations.

In response to the above limitations, the first is a point well taken. The instructor can not decide to go to microcomputers and expect to get a free, easy ride. In fact, as Humburg (1983:102) states:

> The one drawback to the micro-mini program is that it places a time and effort burden on the business instructor, especially during the first year of implementation. The program will not work unless the business teacher is willing to give the time, energy, and commitment to planning, evaluating, and managing the project. It is essential that the business teacher keep up professionally on the use of computer technology in business and in education. In addition, the business teacher must be an efficient manager of individualized instruction, so that the student needs and interests are met.

Walker's second and third points may or may not be serious limitations. It is true that many products are being produced today, but there are not a tremendous amount of good software packages and it always seems that the good software does become known the best and used the most. The Alberta Department of Education routinely reviews educational software, and has found the software problems minimal. There is a three stage process that the department uses. First the software is evaluated by three instructors trained in the evaluation process, then the reports are compiled into a single report and if the result is commendable, it is assessed by the Alberta Education's Curriculum Branch. If a person has user-friendly software, microcomputers are usually only difficult to use if a person has computer phobia.

Points four through six are true. It is hard to produce good software and to get good results. However, knowing the microcomputer does promote more active learning because a student can receive immediate feedback on his/her attempts, using the computer to process a student's response immediately determines where to go from there. If the student's response is incorrect, a good program will detect it and provide the needed assistance. The benefits are endless and teachers can not decide to ignore the microcomputer and still consider themselves progressive instructors.

The problems facing education are a reality of life, and it is true the microcomputer will not solve and may increase the problems. The wealthier population will be able to purchase home computers, and the students found in this population may have an advantage over others less fortunate.

The above limitations present many problems, some being more serious than others depending on the circumstances. They may also be stated more negatively then they should be, however, the point is that there will be problems facing students and instructors. D'Onofrio's perception of microcomputers and their impact on students seems to sum it up (1983:21).

> Regardless of the approach used in introducing microcomputers into the ... classroom, students become more comfortable with microcomputer technology. They become familiar with microcomputer terminology and learn to operate microcomputers and peripheral devices. Through this exposure they may increase their conceptual understanding of the operation of a microcomputer configuration. In doing so, a reduction in computer mystique may result. The capability and limitations of microcomputers and the importance of the machine become more evident to the student.

This goal gives us the type of person that business organizations want.

TRAINING REQUIREMENTS

The question that all students should and must ask is what sort of training do they need or what is computer

literacy? Business organizations "want people with an awareness of computers and a willingness to learn about them. They want people with flexibility and without computer phobia. In short they want employees who will be able to use a computer." (Merchant, 1981:1) Another way it is stated is by Campbell: (1982, 89) "students need to be computing literate rather than computer literate." He also states that a "computing literate person does not need to know how to write programs; what is needed is the ability to use computers and computer programs to complete assigned work."

The first step is to eliminate computer phobia. The way to do this is to "view computers as (you) do adding machines and calculators-as tools that enable (you) to perform desired or required tasks." (Campbell, 1982:89) The best way to start viewing the computer as a machine is to get hands-on experience with it using a simple course that requires data entry, data correction, data storage, and data retrieval. The actual computer application program is not as important as the fact that the program meets these needs without a lot of frustration and grief for a new user. It is impossible to anticipate the needs of every employer and even if it were possible, the cost of purchasing all the software and hardware would be prohibitive. This basic course would be compulsory for anyone without any prior experience with computers. It is to be

expected that the enrollment of this course would decrease as more and more high schools are able to purchase microcomputers and utilize them.

MICROCOMPUTERS IN BUSINESS EDUCATION

"Ready or not, teachers will face the challenge of the electronic age." (McKay, 1984:33) Business educators are finding that as an instructional device, microcomputers are an advantage to their classes. Students' interests are high and in most cases the problem is to find enough time for everyone rather than having to force students to the terminals.

"No matter how short, tentative or temporary it may be, every educational institution (first) needs a written statement of what role it intends computer literacy to play in its (business) education curriculum." (Haigh, 1985, 171) That way, the business institution can provide appropriate educational preparation for a career in business because it will have identified trends that will provide essential information to serve as a background for informed decisions. This helps the instructor to develop an understanding of the purpose to which the computer will be used. This also necessitates a computer literate instructor. It may require the business education teacher to take the initiative and learn how to use microcomputers, to take

college or university courses, attend seminars, conferences, or similar upgrading.

Once the statement is defined, then the decisions of what functions need improvement, what software is available that will aid in doing the job better and more efficiently, and what microcomputers will run the software, need to be made. However, it is important that the decision process follows in the above order. It is all too often that one hears about purchases of microcomputers and the software they want to use is not compatible. (Campbell, 1982:90)

INTEGRATING MICROCOMPUTERS INTO THE BUSINESS EDUCATION CURRICULUM

The ability to incorporate microcomputers into the business education curriculum is not only feasible but the obvious challenge for the business instructor.

The use of software will not be a great issue for the business instructor to solve. The Alberta Department of Education (1983:1) has reviewed Apple computer courseware in business education on the curricular requirements of Alberta.

> Alberta Education has set up a three stage process for the evaluation of computer courseware. If found appropriate, the courseware is evaluated independently by three teachers who have been trained and tested in evaluation techniques and the use of the instrument developed by Alberta Education. Their three reports are synthesized into one report, and if that report is favorable, the materials advance to the final stage. In the third stage, the courseware is

assessed by Alberta Education's Curriculum Branch which makes a decision on its status.

Apple has been the main computer used in Alberta because of the tremendous support of the company and the lack of interest of the other companies, (although due to the tremendous volume of Apple computers being purchased, other vendors are now trying to gain some hold on the market.)

SUMMARY

The use of microcomputers in the classroom can be justified because economic growth of our country and our educational institutions are dependant on each other. The microcomputer can also assist teachers in the classroom to become more effective instructors by freeing their time from the necessary but time-consuming paperwork, drills, and remediation. In the study of the use of microcomputers in the classroom, one must remember that it does have limitations and it is necessary to adjust to them.

When looking at the training requirements for a student to prepare him or her for the business world, it is necessary to realize it is impossible to supply the exact training required of every business in every situation. The main goal teachers face is to prepare their students for the world by carrying a knowledgeable view of the microcomputer.

When planning a program for the students, the statement of the role computers will have in the program must be clearly defined and then the objectives set before proceeding. Once this is done, then it is possible to look for the software and machines to do the job.

CHAPTER III

PROCEDURES

INTRODUCTION

The purpose of this study was to determine the students' assessment of the microcomputer in the classroom on entering a one year business class, after completion of the class and after being in the business work force for one year. The conclusions reached and recommendations made from the follow-up study can be of significance in planning a business education curriculum.

This chapter accomplishes the following:

1. Describes the sources of the data.
2. Describes the construction of the survey instrument to collect the data.
3. Describes the procedures used in the administration of the survey instrument.
4. Analyzes the data.

SOURCES OF DATA

To determine the students' idea of the requirements of microcomputers in the work force, a new group of twelve entrees for a one-year secretarial business course offered at the Community Vocational Centre, Slave Lake, were

selected September, 1985 for the pre-test. This same group of students were also used for the post-test in January, 1986. The business site questionnaire was given to the previous year's graduates that were available and working in June, 1986.

As the pre-test and the post-test questionnaires were given by the investigator, all forms were completed and returned. Question 10 was eliminated from the results due to the lack of understanding of the question. Question 10 was covered in other questions and seemed to confuse the students. (For example, 50 percent of the students failed to respond to part c.) For the work experience questionnaire, an attempt was made to locate and telephone all the 1985 graduates either through their present jobs or their last known home telephone numbers (names, telephone numbers and last known job situations were supplied by Ms. Monique Belanger, the secretarial business instructor.) Of the list supplied, 7 of the 12 (58 percent) were located, working, and their responses tallied. Three of the twelve, Ms. Belanger was unsure of their present job situation (or if they had one) and their previously known telephone listing received no answer (usually a recording) and they could not be reached. (The researcher had to assume they had moved.) One student did not have a present job situation and was not considered due to the lack of knowledgeable input to the questionnaire. One student was attending a

higher institution of learning and was not considered either. Any questions that the students had about the questionnaires was answered directly by the researcher.

TYPE OF SURVEY INSTRUMENT

This investigator decided to use the questionnaire approach (Appendix A.) The questionnaires were designed by the researcher with the help of several graduate students in business education, Redina Berscheid and Larry Krein, and special help was received from Dr. Daniel Hertz.

ADMINISTRATION OF THE SURVEY INSTRUMENT

The survey instrument was given to a class of twelve in September, 1985 for the pre-test questionnaires and to the same class in January, 1986 for the post-test questionnaire. All of the questionnaires were completed and returned to the researcher. The business-site questionnaire was phoned by the researcher to last year's graduates in June, 1986. A list of the graduates was supplied by the secretarial instructor. Of the twelve students that attended last year, the researcher was able to acquire seven responses.

ANALYSIS OF THE DATA

Once the researcher had given each of the questionnaires to each group, the responses for each question were tallied. The results were reported by listing the total number responding to each question and the percentage. The data was analyzed by the total number responding to each question and placing this on a percentage basis. By reviewing the data obtained from the tabulations of the questions, the researcher drew conclusions and made recommendations.

CHAPTER 4

FINDINGS

Introduction

This chapter presents tabulations and interpretations of the data obtained from the survey of the students from the Community Vocational Center at Slave Lake, Alberta to determine the relevancy of the microcomputer to required job skills. The tabulations of the data are presented in numerical order with the findings shown in table form.

Three questionnaires were given. A scale from 5 to 1 (5 meaning to agree strongly, 4 to agree, 3 to be unsure, 2 to disagree and 1 to disagree strongly) was used for the respondents to record their answers.

The pre-test questionnaire of twelve questions was given to twelve students, a new group of entrees of a one-year secretarial business course. The post-test questionnaire was given to the same group of students and consisted of two parts, the first part of twelve questions asking about the use of microcomputers in the classroom and the second part of eight questions asking about the use of business

machines in the classroom. The work experience questionnaire consisted of nine questions asking about the use of business machines.

The tables were set up to show the total number responding to each question, and the percent responding to each answer.

PRE-TEST QUESTIONNAIRE

Table 1

Question 1: Do you presently own a computer?

DEGREE OF RESPONSE	NUMBER	PERCENT
Yes	0	0%
No	12	100%
Total	12	100%

Of all the students tallied, not one presently owned a computer.

Table 2

Question 2: If you do not own a computer, do you think you will eventually own one?

DEGREE OF RESPONSE		NUMBER	PERCENT
Agree Strongly -	5	1	8%
Agree	4	2	17%
Unsure	3	8	66%
Disagree	2	1	8%
Disagree Strongly -	1	0	0%
Total		12	100%

Although a number of students believe they will eventually get a computer (25 percent), there is still a large number who do not know if a computer will eventually be in their homes (67 percent) and one student who does not think she will probably ever own one.

Table 3

Question 3: Do you think computer literacy is important enough to have a place in the classroom? (Computer literacy was defined as the compendium of knowledge and skill that ordinary, educated people need to have about computers in order to function effectively at work and in their private lives.)

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	7	59%
Agree 4	4	33%
Unsure 3	1	8%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

Most of the students were in agreement that it is necessary to have computer literacy taught in the classroom (91 percent). Only one student was not in agreement with her classmates.

Table 4

Question 4: Is computer literacy necessary for all students in our institutions?

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	6	50%
Agree 4	4	34%
Unsure 3	1	8%
Disagree 2	0	0%
Disagree Strongly - 1	1	8%
Total	12	100%

Most of the students (83 percent) believed that computer literacy was necessary for all institutions to be teaching although one student strongly disagreed.

Table 5

Question 5: Should the ability to write and debug computer programs be a component of computer literacy?

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	5	42%
Agree 4	1	8%
Unsure 3	3	25%
Disagree 2	1	8%
Disagree Strongly - 1	2	17%
Total	12	100%

The opinions of the students about writing programs were quite mixed. Half the students were in agreement that they should be able to write or debug programs. The rest were unsure or disagreed that it was a necessary part of their curriculum.

Table 6

Question 6: Should computer skills and knowledge be incorporated into existing courses (like accounting and typing?)

DEGREE OF RESPONSE		NUMBER	PERCENT
Agree Strongly -	5	5	42%
Agree	4	7	58%
Unsure	3	0	0%
Disagree	2	0	0%
Disagree Strongly -	1	0	0%
Total		12	100%

The students are all in agreement that existing courses should be using computer skills and knowledge. This emphasizes the fact that students believe that computer skills should not just be a separate course but integrated into all courses.

Table 7

Question 7: Should computer skills be learned prior to this class?

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	5	42%
Agree 4	1	8%
Unsure 3	3	25%
Disagree 2	1	8%
Disagree Strongly - 1	2	17%
Total	12	100%

The students were divided about the question of whether they should know computer skills prior to this class. While six (50 percent) agreed that they should know computer skills before entering the class, three (25 percent) disagreed. Three students (25 percent) were also uncertain whether they should have these skills or not.

Table 8

Question 8: Should computer literacy be necessary to qualify to complete a secretary technology business class?

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	3	25%
Agree 4	4	33%
Unsure 3	2	17%
Disagree 2	2	17%
Disagree Strongly - 1	1	8%
Total	12	100%

Seven (58 percent) of the students felt that computer literacy was necessary when a secretary technology business class was completed. Three (25 percent) of the students disagreed that computer literacy was necessary and two (17 percent) of the students are unsure.

Table 9

Question 9: Have you taken any previous courses in computers?

DEGREE OF RESPONSE	NUMBER	PERCENT
Yes	1	8%
No	11	92%
Total	12	100%

The majority (92 percent) of the students had not taken a previous course in computers. This was consistent with question one where none of the students owned a computer. Probably if the students owned their own computer, they would have been more likely to have taken courses, if for no other reason then to become more comfortable with different software.

Table 10

Question 11: Do you feel that the use of computer skills is a necessary skill today?

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	4	33%
Agree 4	4	33%
Unsure 3	3	26%
Disagree 2	1	8%
Disagree Strongly - 1	0	0%
Total	12	100%

It would appear that although eight (66 percent) of the respondents felt that computer skills are necessary today, three (25 percent) were not sure and one (8 percent) did not agree.

Table 11

Question 12: Do you feel that the use of computer skills will be a necessary skill in the future?

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	9	75%
Agree 4	3	25%
Unsure 3	0	0%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

The question had the largest agreement of all the questions on the pre-test questionnaire. All students felt that computer skills would be very necessary in the future and of the twelve, nine (75 percent) students had very strong feelings that computer skills would be necessary in the future.

POST-TEST QUESTIONNAIRE

Table 12

Question 1: The introduction of microcomputers established a perceived purpose.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	3	25%
Agree 4	4	33%
Unsure 3	5	42%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

While the majority of the students (58 percent) felt that the introduction did make them aware of the purpose of the program, a high minority (42 percent) were not sure.

Table 13

Question 2: Clear objectives were set from the use of the microcomputers.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	3	26%
Agree 4	4	33%
Unsure 3	4	33%
Disagree 2	1	8%
Disagree Strongly - 1	0	0%
Total	12	100%

Of the twelve students, seven (58 percent) felt that clear objectives were set for using microcomputers and four were unsure. One person also did not feel that the objectives were not clear.

Table 14

Question 3: The learning objectives directed the student to perform specified objectives.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	4	33%
Agree 4	6	50%
Unsure 3	2	17%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

Ten of the twelve students felt that the learning objectives did direct the students to perform specified objectives. Only two of the students were not sure.

Table 15

Question 4: The software program used was easy to learn and apply - user-friendly.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	8%
Agree 4	8	67%
Unsure 3	3	25%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

Although only one felt strongly that the program used was user friendly, eight (67 percent) of the others agreed that the program was not that difficult to use. Three of the students (25 percent) felt it was neither really easy or really difficult.

Table 16

Question 5: The software used was easy to bring on line.

DEGREE OF RESPONSE		NUMBER	PERCENT
Agree Strongly -	5	3	25%
Agree	4	5	42%
Unsure	3	3	25%
Disagree	2	1	8%
Disagree Strongly -	1	0	0%
Total		12	100%

The majority of the students (67 percent) felt that the software was easy to bring on line with three (25 percent) unsure and one who did not feel it was easy.

Table 17

Question 6: The program speed was adequate.

DEGREE OF RESPONSE		NUMBER	PERCENT
Agree Strongly -	5	2	16%
Agree	4	5	42%
Unsure	3	5	42%
Disagree	2	0	0%
Disagree Strongly -	1	0	0%
Total		12	100%

While five students (42 percent) felt the speed was adequate, another seven felt the speed was about right for the course. No one felt the program was presented too quickly of too slowly.

Table 18

Question 7: The program allowed the students to correct his/her errors without difficulty.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	3	25%
Agree 4	6	50%
Unsure 3	1	8%
Disagree 2	2	17%
Disagree Strongly - 1	0	0%
Total	12	100%

A large number of respondents (75 percent) were quite happy with their ability to correct mistakes. One student found a medium degree of difficulty while two respondents found it quite difficult.

Table 19

Question 8: The displays on the screen were clear and easy to read.

DEGREE OF RESPONSE		NUMBER	PERCENT
Agree Strongly -	5	7	58%
Agree	4	5	42%
Unsure	3	0	0%
Disagree	2	0	0%
Disagree Strongly -	1	0	0%
Total		12	100%

All the students were quite happy with the displays on the screen. All the computer screens used green on the black background.

Table 20

Question 9: The documentation was clear and concise with the software used.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	8%
Agree 4	2	17%
Unsure 3	7	58%
Disagree 2	2	17%
Disagree Strongly - 1	0	0%
Total	12	100%

The greatest percentage (58 percent) of the students thought the documentation was about average difficulty, while two students felt it fairly easy and two students felt it fairly difficult.

Table 21

Question 10: Practice activities enabled the student to apply what was learned and provide feedback.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	8%
Agree 4	9	75%
Average 3	2	17%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

A high percentage of the students (83 percent) were happy with their assignments and the work required of them. Only two students felt the work and the assignments were only adequate.

Table 22

Question 11: The criterion test asked the student to perform as specified in the objectives.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	8%
Agree 4	3	25%
Average 3	8	67%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

Most of the students (67 percent) thought the test was meeting the objectives adequately while the rest felt the final did a good job.

Table 23

Question 12: The program will be somewhat compatible with other software that will be used in the job market.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	2	17%
Agree 4	4	33%
Unsure 3	5	42%
Disagree 2	1	8%
Disagree Strongly - 1	0	0%
Total	12	100%

Of all the students, only one was dissatisfied with the software packages used and did not feel the programs would be of much use in the work force. The rest all felt that the programs were at least adequate (42 percent) or good (50 percent).

USE OF BUSINESS MACHINES IN THE CLASSROOM

Table 24

Question 1: The business program offers courses and programs that meet the educational needs of all the students.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	8%
Agree 4	6	50%
Unsure 3	4	34%
Disagree 2	0	0%
Disagree Strongly - 1	1	8%
Total	12	100%

Seven of the students (58 percent) felt the business program was doing a good job of meeting their needs while four felt it was fine. Only one student was very negative about it meeting her educational need.

Table 25

Question 2: The business program offers courses to enable students to acquire business skills for their personal use.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	2	16%
Agree 4	5	42%
Adequate 3	5	42%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	12	100%

Seven of the students (59 percent) felt that the courses taught would be useful in their personal use and the other five felt they would only be somewhat useful.

Table 26

Question 3: The business program offers a course leading to the prudent management of one's financial activities.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	8%
Agree 4	1	8%
Adequate 3	9	76%
Disagree 2	1	8%
Disagree Strongly - 1	0	0%
Total	12	100%

The majority (76 percent) of the feeling was that the business program's emphasis was only adequate with learning to deal with one's own personal finances.

Table 27

Question 4: Business courses are organized around major occupational areas.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	8%
Agree 4	1	8%
Unsure 3	8	68%
Disagree 2	1	8%
Disagree Strongly - 1	1	8%
Total	12	100%

Although a good majority of the students (68 percent) were unsure whether the program had courses that covered only major occupational, there were some who felt it strongly did and some felt strongly that it did not. Opinion was quite diversified on this question.

Table 28

Question 5: As a basis of grading, on-the-job standards of achievements are established for such business courses as shorthand and typing.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	2	17%
Agree 4	2	17%
Unsure 3	6	50%
Disagree 2	1	8%
Disagree Strongly - 1	1	8%
Total	12	100%

Half the students (50 percent) were mainly unsure whether the standards demanded of them in class would meet the standards required in the work force although four were sure they would and two were sure they would not!

Table 29

Question 6: Training on the office machines is on an orientation level rather than on a level of development of high operational skill.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	2	17%
Agree 4	2	17%
Unsure 3	5	43%
Disagree 2	3	25%
Disagree Strongly - 1	0	0%
Total	12	100%

The students had different opinions on whether the office machine training was mainly orientational or highly skilled. While four (33 percent) felt it more orientational, three (25 percent) maintained that it developed the training to a high degree. Five students (42 percent) were not sure.

Table 30

Question 7: Training includes improving English skills including oral communication.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	2	17%
Agree 4	2	17%
Unsure 3	5	42%
Disagree 2	2	17%
Disagree Strongly - 1	1	8%
Total	12	100%

Various students were unsure (42 percent) that English skills were significant in their curriculum although there were diverse opinions both ways.

Table 31

Question 8: Evaluation and judgment skills were included in the curriculum.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	2	17%
Agree 4	2	17%
Unsure 3	6	49%
Disagree 2	2	17%
Disagree Strongly - 1	0	0%
Total	12	100%

Two students alleged (17 percent) that evaluation and judgment skills were not that significant in their curriculum. Four students did feel that they were included while two students were unsure.

WORK EXPERIENCE QUESTIONNAIRE

Table 32

Question 1: The business program offered courses and programs that met the on-the-job site needs.

DEGREE OF RESPONSE		NUMBER	PERCENT
Agree Strongly -	5	4	57%
Agree	4	3	43%
Unsure	3	0	0%
Disagree	2	0	0%
Disagree Strongly -	1	0	0%
Total		7	100%

All the students interrogated from the previous year's class were pleased with the secretarial science program with the majority very satisfied!

Table 33

Question 2: The business program offered courses to enable ones use of business skills for personal use.

DEGREE OF RESPONSE		NUMBER	PERCENT
Agree Strongly -	5	3	43%
Agree	4	3	43%
Unsure	3	1	14%
Disagree	2	0	0%
Disagree Strongly -	1	0	0%
Total		7	100%

Six of the seven students (86 percent) were pleased with the skills offered that helped them in their personal life. Only one student was not sure that the course helped personally.

Table 34

Question 3: The business program offered a course leading to the prudent management of one's financial activities.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	1	14%
Agree 4	2	29%
Unsure 3	2	29%
Disagree 2	1	14%
Disagree Strongly - 1	1	14%
Total	7	100%

The class was quite divided on the question about having taken a course on careful management of their personal finances. Two students (29 percent) were not sure, two students (29 percent) did not feel they did, and three students (43 percent) felt they did.

Table 35

Question 4: Business courses were organized around major occupational areas.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	5	72%
Agree 4	1	14%
Unsure 3	1	14%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	7	100%

Six of the students (86 percent) were very pleased with how the business courses were organized around the major occupational areas. Only one student was doubtful that the courses were arranged around the major occupational areas, with five of the six students very pleased.

Table 36

Question 5: As a basis of grading, on-the-job standards of achievement were established for such business courses as shorthand and typing.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	5	71%
Agree 4	2	29%
Unsure 3	0	0%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	7	100%

All the students felt that the standards in the business education course were high enough to meet on-the-job requirements with five students very pleased.

Table 37

Question 6: Training on the specialized office machines was on an orientation level rather than on a level of development of high operational skill.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	5	72%
Agree 4	0	0%
Unsure 3	1	14%
Disagree 2	0	0%
Disagree Strongly - 1	1	14%
Total	7	100%

Five of the seven students (72 percent) felt that the training on the specialized machines was only on an orientational level, one student was not sure, and one felt strongly that it went beyond the orientational level.

Table 38

Question 7: Training included improving English skills including oral communication.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	3	42%
Agree 4	2	29%
Unsure 3	0	0%
Disagree 2	2	29%
Disagree Strongly - 1	0	0%
Total	7	100%

Five of the students (43 percent) did feel that their English skills were improved while two (29 percent) did not feel there was any improvement.

Table 39

Question 8: Evaluation and judgment skills were included that helped on the job.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	2	29%
Agree 4	2	29%
Unsure 3	2	29%
Disagree 2	1	13%
Disagree Strongly - 1	0	0%
Total	7	100%

Four of the students (58 percent) felt that evaluation and judgment skills were included in their training, two were unsure, and one did not think that the skills were included.

Table 40

Question 9: Business courses were relevant and timely.

DEGREE OF RESPONSE	NUMBER	PERCENT
Agree Strongly - 5	4	57%
Agree 4	1	14%
Unsure 3	2	29%
Disagree 2	0	0%
Disagree Strongly - 1	0	0%
Total	7	100%

Five (71 percent) felt that the courses were relevant and timely. Two others (29 percent) were unsure how timely the courses were.

SUMMARY

All of the twelve students of Slave Lake Community Vocational Center that were taking secretarial science September 1986 were given the pre-test questionnaire prior to taking a computer literacy class and the same students were given the post-test questionnaire after the computer literacy test. The work experience questionnaire was given to seven of the twelve students that attended the program from the 1985 class.

Prior to taking the computer literacy class, the students were all in agreement that computer skills and knowledge be incorporated into existing courses. In the class of twelve students, no one owned a computer and only one person had taken any previous computer classes. Eleven of the twelve students agreed that computer literacy is important enough to have a place in the classroom with only one uncertain. Everyone was also certain that computer skills would be necessary in the future.

After taking the computer literacy class, the majority were quite satisfied with the computer course. However, 25 to 42 percent of the students that rated the class as average. The students also rated the classes on business machines as average.

The data obtained from the students that had taken the

class the previous year were very pleased with the business secretary course and only rated the questions relating to personal skills as low.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to determine if what was being taught in a secretarial business class actually meets the on-the-job microcomputer knowledge requirements. This study was conducted on a class of post-secondary students at the Community Vocational Center at Slave Lake, Alberta. The review of literature showed that it is necessary in this time of high technology to become computer literate, and it is necessary for the business teacher to be aware of the current trends and be teaching accordingly.

The investigator's studies were to determine if the microcomputer was relevant to job skills and were these skills being taught. The first study was to see if the incoming students of a Community Vocational Center thought computer skills were necessary. The second study was to determine these student's opinions after completing the one-year program. The last study was to determine if the students were actually being taught the necessary skills required.

Three questionnaires were developed to gather the information required and these questionnaires were directly

administered to the population. The population was a class of students from a one-year secretarial business course offered at Slave Lake, Alberta. A pre-test and post-test was administered to the new 1985 entrees. The business site questionnaire was administered to the 1984 graduates.

CONCLUSIONS

At the beginning of the study, specific questions were established, and these were used as a guide during the research process. Each of these questions is stated along with the conclusions that the research has provided.

PRE-TEST QUESTIONNAIRE

1. DO THE STUDENTS THINK COMPUTER LITERACY IS IMPORTANT TO HAVE A PLACE IN THE CURRICULUM?

   Most of the students (91 percent) felt that computer literacy should have a place in the curriculum. Only one student was unsure.

2. DO THE STUDENTS FEEL THEY WILL NEED COMPUTER SKILLS IN THE FUTURE?

   All the students felt that the use of computer skills would be a necessary skill in the future with seventy-five percent agreeing very strongly.

POST-TEST QUESTIONNAIRE

3. DID THE INTRODUCTION OF MICROCOMPUTERS MEET THE STUDENTS' PERCEIVED NEEDS?

A majority of the students (58 percent) felt that the introduction of microcomputers did meet theirs needs, yet a high minority (42 percent) were not sure.

4. WILL THE SOFTWARE USED BE SOMEWHAT COMPATIBLE WITH SOFTWARE THAT WILL BE USED IN THE JOB MARKET?

The students had mixed opinions on this question. One student disagreed that it would be compatible, five (42 percent) were unsure and six (50 percent) felt that the software was somewhat compatible.

5. DO THE STUDENTS FEEL THE BUSINESS COURSES ARE ORGANIZED AROUND MAJOR OCCUPATIONAL AREAS?

Eight of the students (68 percent) were unsure if the courses were organized around the major business areas, while two students (16 percent) thought they were and two students (16 percent) did not.

WORK EXPERIENCE QUESTIONNAIRE

6. DID THE STUDENTS FIND THE BUSINESS COURSES TAUGHT AT THE POST-SECONDARY INSTITUTION UP-TO-DATE AND BENEFICIAL TO THE JOB SITUATION?

All of the students were pleased with the secre-

tarial science program taken the previous year and four (57 percent) stated they were very pleased.

RECOMMENDATIONS

From the information obtained from this study and the review of related literature, the following recommendations are made.

1. Computer skills continue to be integrated into the overall secretary science program. The course should continue to place emphasis on computer literacy rather then on learning how to write programs. In a situation where the hardware is not the best possible, it is still better to be getting the students working on some software and getting some learning experiences then none at all.
2. The business secretary instructor should include personal study skills into the curriculum. The standards set for the teaching of the business machines and computers were certainly appropriate and the students were very pleased that they did acquire the level of competency that they did.
3. Additional studies should be conducted to determine just how important computers are becoming. The demand for the courses and the extensive use of computers in business and industry indicates that microcomputers are becoming very important to those

who study business education and to the students who study secretarial business education.

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APPENDIX A

Pre-test Questionnaire

In order to complete this survey, it is necessary to understand that the definition of "computer literacy" in this context means:

the compendium of knowledge and skill that ordinary, educated people need to have about computers in order to function effectively at work and in their private lives.

Please indicate your answer to the following questions by

A) circling Y for yes, N for no

OR

B) circling the appropriate number USING the scale below:

AGREE STRONGLY 5 4 3 2 1 DISAGREE STRONGLY

1. Do you presently own a computer?.....Y N

2. If you do not own a computer, do you think you will eventually need to own one?.....5 4 3 2 1

3. Do you think computer literacy is important enough to have a place in the classroom?.....5 4 3 2 1

4. Is computer literacy necessary for all students in our institutions?.....5 4 3 2 1

5. Should the ability to write and debug computer programs be a component of computer literacy?.....5 4 3 2 1

6. Should computer skills and knowledge be incorporated into existing courses (like accounting, typing?).....5 4 3 2 1

7. Should computer skills be learned prior to this class?.....5 4 3 2 1

8. Should computer literacy be necessary to qualify to complete a secretary technology business class?.....5 4 3 2 1

9. Have you taken any previous courses in computers? Y N

10. Which specific computer skills must students exhibit in order to be said to be computer literate?
    a) programming.....5 4 3 2 1
    b) use of software program.....5 4 3 2 1
    c) other.....5 4 3 2 1

11. Do you feel that the use of computer skills is a necessary skill today?.....5 4 3 2 1

12. Do you feel that the use of computer skills will be a necessary skill in the future?.....5 4 3 2 1

Comments:

APPENDIX B

Post-test Questionnaire

Please indicate your answer to the following questions by circling the appropriate number USING the scale below:

AGREE STRONGLY 5 4 3 2 1 DISAGREE STRONGLY

USE OF MICROCOMPUTERS IN THE CLASSROOM

1. The introduction of microcomputers established a perceived purpose.....5 4 3 2 1
2. Clear objectives were set for the use of the microcomputers.....5 4 3 2 1
3. The learning objectives directed the student to perform specified objectives.....5 4 3 2 1
4. The software program used was easy to learn and apply - user-friendly.....5 4 3 2 1
5. The software used was easy to bring on line....5 4 3 2 1
6. The program speed was adequate.....5 4 3 2 1
7. The program allowed the student to correct his/her errors without difficulty.....5 4 3 2 1
8. The displays on the screen were clear and easy to read.....5 4 3 2 1
9. The documentation was clear and concise with the software used.....5 4 3 2 1

10. Practice activities enabled student to apply what was learned and provided feedback.....5 4 3 2 1

11. The criterion test asked the student to perform as specified in the objectives.....5 4 3 2 1

12. The program will be somewhat compatible with other software that will be used in the job market.....5 4 3 2 1

USE OF BUSINESS MACHINES IN THE CLASSROOM

1. The business program offers courses and programs that meet the educational needs of all the students.....5 4 3 2 1

2. The business program offers courses to enable students to acquire business skills for their personal use.....5 4 3 2 1

3. The business program offers a course leading to the prudent management of one's financial activities.....5 4 3 2 1

4. Business courses are organized around major occupational areas 5 4 3 2 1

5. As a basis of grading, on-the-job standards of achievement are established for such business courses as shorthand and typing.....5 4 3 2 1

6. Training on the office machines is on an orientation level rather than on a level of development of high operational skill.....5 4 3 2 1

7. Training includes improving English skills including oral communication.....5 4 3 2 1

8. Evaluation and judgment skills were included in the curriculum.....5 4 3 211

APPENDIX C

Work Experience Questionnaire

Please indicate your answer to the following questions by circling the appropriate number USING the scale below:

AGREE STRONGLY 5 4 3 2 1 DISAGREE STRONGLY

USE OF BUSINESS MACHINES

1. The business program offered courses and programs that met the on-the-job site needs...5 4 3 2 1
2. The business program offered courses to enabling use of business skills for personal use.....5 4 3 2 1
3. The business program offered a course leading to the prudent management of one's financial activities.....5 4 3 2 1
4. Business courses were organized around major occupational areas 5 4 3 2 1
5. As a basis of grading, on-the-job standards of achievement were established for such business courses as shorthand and typing.....5 4 3 2 1
6. Training on the office machines was on an orientation level rather than on a level of development of high operational skill.....5 4 3 2 1
7. Training included improving English skills including oral communication.....5 4 3 2 1

8. Evaluation and judgment skills were included that helped on the job.....5 4 3 2 1

9. Business courses were relevant and timely.....5 4 3 2 1