International Perspectives: Polish Post – Secondary Vocational Schools and Canadian Community Colleges: A Comparison Using an Information Technology Conceptual Model

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ABSTRACT

This study compares Polish post-secondary vocational institutions with Canadian community colleges using an information technology conceptual framework. The research concentrated upon programs in information technology delivered by one Polish school Cracow School of Information Technology and two Canadian community colleges Durham (Oshawa, Ontario) and Confederation (Thunder Bay, Ontario). It is recommended that additional research be carried out, in the future, involving a larger number of institutions.
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What are Post-Secondary (Grammar) Vocational Schools
(szkoły policealne i pomat)

Post-secondary vocational institutions, which are part of the Polish secondary school systems of schooling, prepare secondary school graduates for employment as "skilled manual workers or their equivalent" and specializations requiring secondary school qualifications (Ministry of National Education, 1994 10). There are three types of schools: 1) public (state), 2) non-public and 3) non-public with state-school status. These post-grammar vocational institution programs which lead to a diploma can be completed within three years, depending on the occupational track (Ministry of National Education, 1994,10). All programs insist upon the completion of secondary school prior to entry.

What are Canadian Community Colleges?

The term community college is generic. According to the Association of Canadian Community Colleges, community colleges are characterized by a number of designations including college of applied arts and technology, College d'Enseignement General et Professionnel (CEGEP) institute of technology and university college (Association of Canadian Community Colleges). The main task of the institutions is to respond to the educational concerns of vocationally orientated school graduates and the training needs of both the public and the private sector (Association of Canadian Community Colleges). In the beginning, colleges offered learners only certificates and diplomas, however, at the moment, some of them award university degrees as well, and a number offer university transfer programs (Association of Canadian Community Colleges).

Introduction

Unlike Poland, Canada does not have a national system of education – each province and territory has its own system of schooling. One advantage of having separate school plans in a country as large as Canada is that regional needs are more likely to be dealt with. Conversely, a single system of schooling might strengthen Canadian identity.

There are guarantees in both countries for private schools and special education.

Purpose and Motivation for this Investigation

The aim of this study was to compare Polish post-secondary vocational institutions with Canadian community colleges. The rationale for doing so is because on one hand many college courses in Canada are occupationally directed and require at least some secondary school attendance prior to admission; on the other hand, in Poland, one must complete secondary school prior to starting a post-grammar vocational institution course. Moreover, post-secondary vocational schools in Poland do not award university degrees, nor do most community colleges. Finally, it must be stressed that these two kinds of institutions are comparable, but not equivalent.

Our comparison focused upon programs in: information technology (3) because we live in an information age (Kupisiewicz, 1999, 111).

This investigation was undertaken to provide information in Canada and Poland about programs with a common mission and because of: the changes that have been taking place in the Polish primary and secondary school system of education.

Theoretical Framework

Since the 1980s (Byron and Glagiardi) massive changes have occurred in the area of information technology (for example, the development of the Internet and (CD-ROMS) which have resulted in more knowledge being available that has brought about a new form of human relationships in terms of participation, feedback and partnership. That being the case it is reasonable to compare Polish post-secondary vocational schools and Canadian community colleges in terms of the manner in which these two kinds of institutions adopt this new form because "Education is not only a preparation for life; it is a development in life" (King, 1979, 12).

This study focused upon the feedback aspect of the theoretical model..

The Research Methodology

Method of Data Collection

A program evaluation form was administered to learners in both Poland and Canada. Furthermore, it consisted of 33 statements, and covered three areas curriculum (8 statements), learning materials (5 statements) and instruction (20 statements). In addition, space was available following each group of statements for comments and recommendations. At the top of the first page provisions were made for students to: 1) write the name of their institution and their program of studies and 2) indicate the year of their studies and sex (male/female).

The form and the instructions associated with it were translated from English into Polish.

Copies of the form were given to eight Cracow School of Information Technology students in order to confirm that the instructions to it were understood and that 30 minutes was sufficient time for it to be completed. The results of these learners were included in our investigation.

The Procedure

The program evaluation forms were completed between January 2001 (Cracow School of Information Technology) and the fall of 2002 (Confederation).

The Analysis

With regard to each student sample:

1. The mean, median mode, standard deviation and of the responses were computed.
2. Response percentages were calculated for statements 1-8 (Curriculum), 9-13 (Learning materials) and 14-33 (Instruction).

Following this, the resulting information was put into histogram format.

The Respondents

A. Cracow School of Information Technology. Thirty-two full-time students took part in our investigation:
   1) 17 first year (of which 13 were male and 4 were female) and
   2) 15 second year (of which 14 were male and 1 was female).

B. Durham College. Fifteen full-time learners filled out our program evaluation instrument (of which 10 were male, 4 were female and 1 was male or female)[1].
C. Confederation College. Fifty-seven full-time students participated in our research:
  1) Eighteen first year (of which 14 were male and 4 were female).
  2) Twenty four second year (of which 21 were male and 3 were female).
  3) Fifteen third year (of which 12 were male, 2 were female and 1 was male or female).

The percentage of learners sampled was greater for the Cracow School of Information Technology population than for the Confederation and Durham ones: 80% (32 out of 40), 64% (15 out of 89) and 60% (15 out of 25) respectively. This means that the participation level in our study was larger for the Polish students than it was for both of their Canadian counterparts.

The Results

Figures 1, 2, 3 and 4 below illustrate the value for the measures of central tendency and the standard deviation for each of the information technology program sample distributions.

Figure 1

**Figure 2**

Information technology program,
Cracow School of Information Technology, Poland
Responses for second year students only

Figure 3

Computer programmer program,
Durham College, Oshawa, Ontario, Canada

Figure 4

Computer programmer analyst program,
Confederation College, Thunder Bay, Ontario, Canada
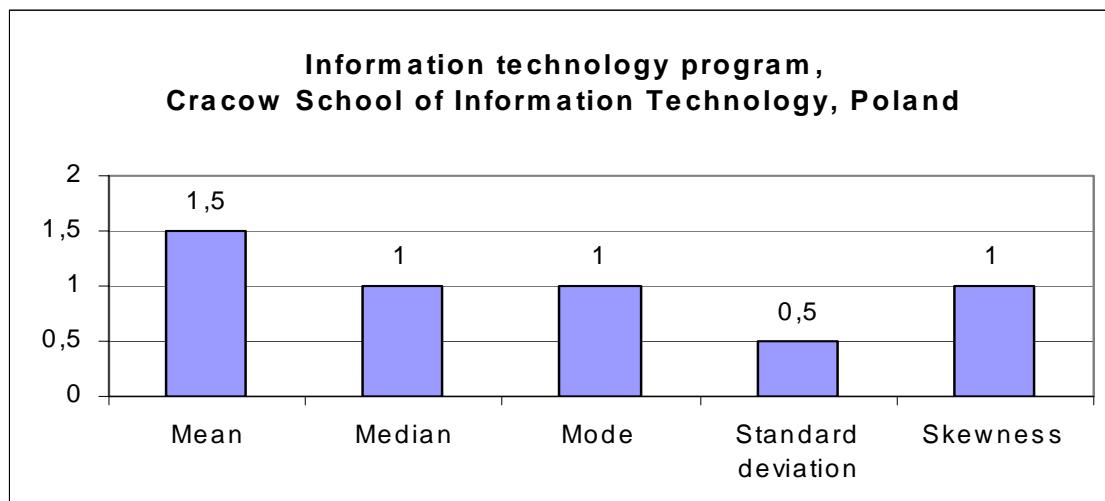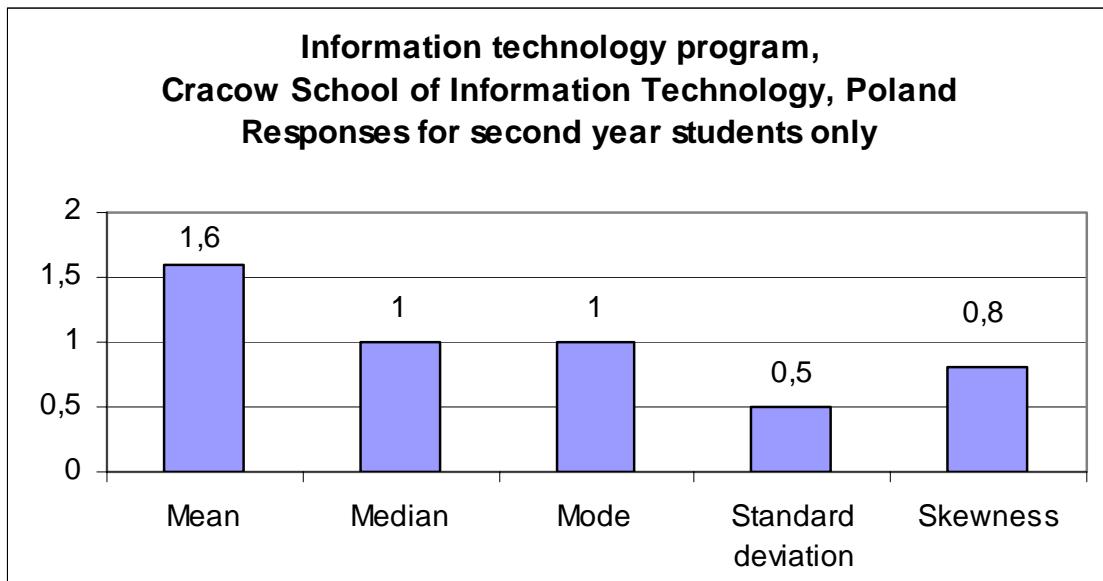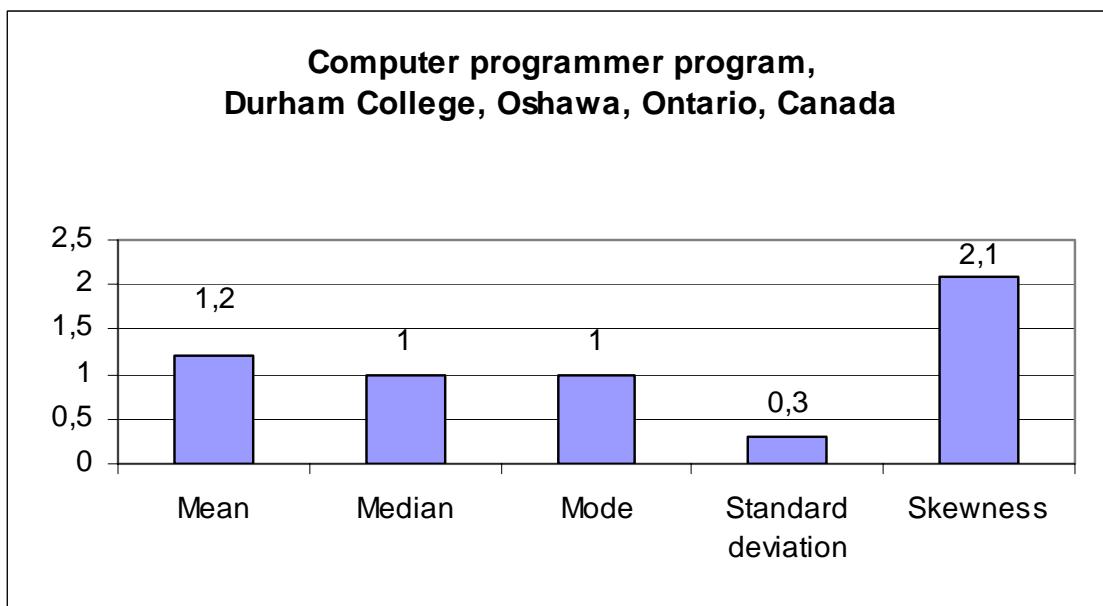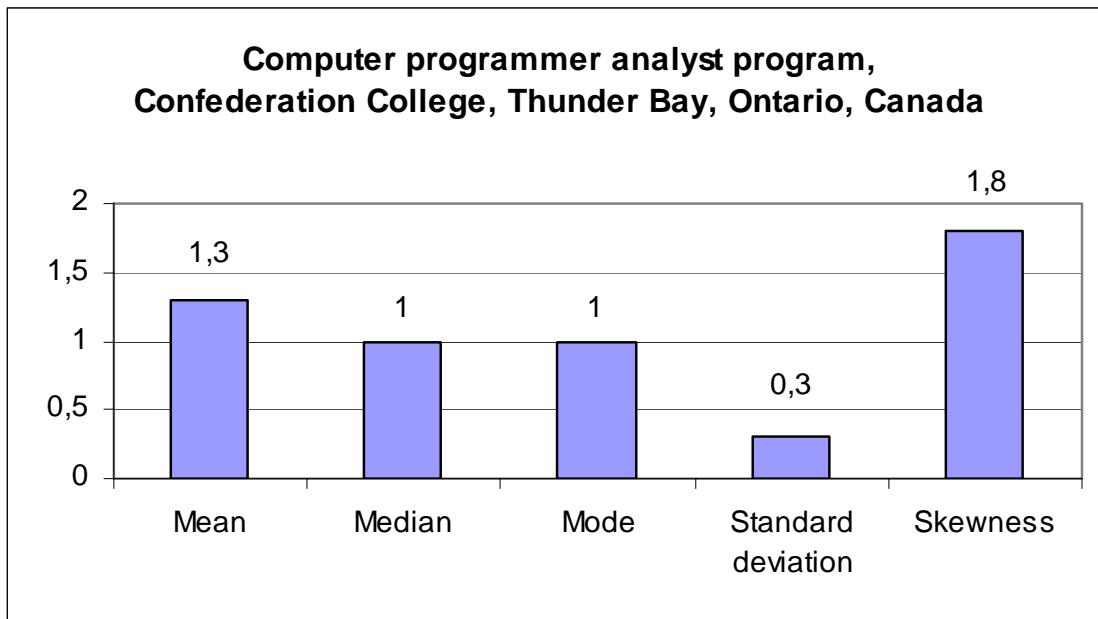
Response percentages for assertions 1-8, 9-14 and 15-33 are shown in Figures 5-8 underneath for each group of information technology participants.

Figure 5

Information technology program,
Cracow School of Information Technology, Poland
Response percentages for statements 1-8 (Curriculum),
9-13 (Learning materials) and 14-33 (Instruction)

	Curriculum	Learning materials	Instruction
Agree	64,1%	56,3%	62,5%
Disagree	20,3%	33,1%	23,9%
Don't know	13,7%	10,6%	13,4%
No answer	2,0%	0,0%	0,2%
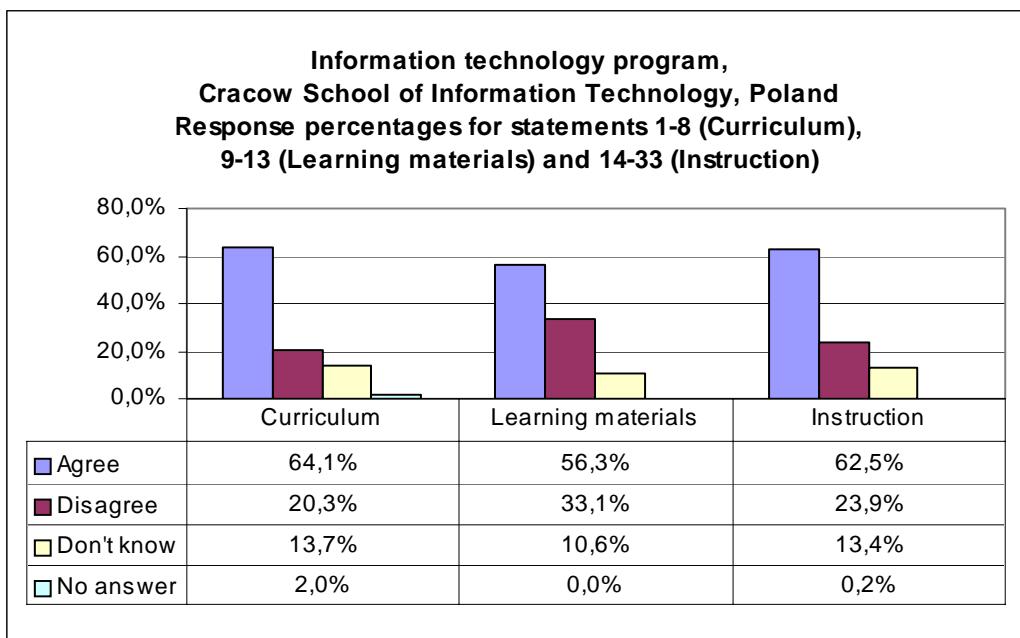
Figure 6

**Information technology program,
Cracow School of Information Technology, Poland
Response percentages for statements 1-8 (Curriculum),
9-13 (Learning materials) and 14-33 (Instruction)
Second year students only**

	Curriculum	Learning materials	Instruction
■ Agree	58,3%	47,8%	60,3%
■ Disagree	22,9%	38,9%	25,8%
□ Don't know	16,7%	13,3%	13,9%
□ No answer	2,1%	0,0%	0,0%
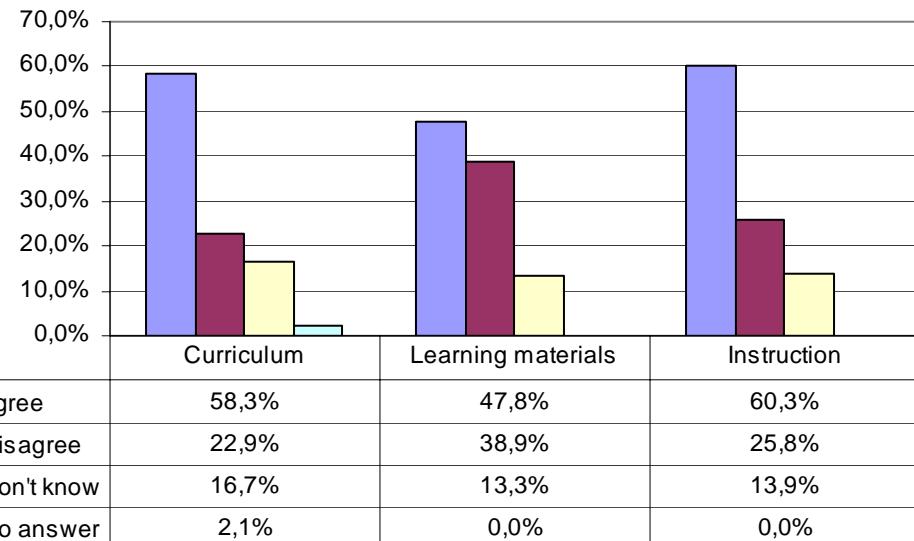
Figure 7

**Computer programmer program, Durham College, Oshawa,
Ontario, Canada
Response percentages for statements 1-8 (Curriculum),
9-13 (Learning materials) and 14-33 (Instruction)**

	Curriculum	Learning materials	Instruction
■ Agree	75,0%	77,3%	84,3%
■ Disagree	15,8%	14,7%	11,3%
□ Don't know	8,3%	8,0%	4,0%
□ No answer	0,8%	0,0%	0,3%

Figure 8

**Computer programmer analyst program,
Confederation College, Thunder Bay, Ontario, Canada
Response percentages for statements 1-8 (Curriculum),
9-13 (Learning materials) and 14-33 (Instruction)**

	Curriculum	Leaning materials	Instruction
Agree	74,6%	74,1%	80,7%
Disagree	15,1%	23,8%	14,3%
Don't know	8,8%	2,1%	4,5%
No answer	1,5%	0,0%	0,5%
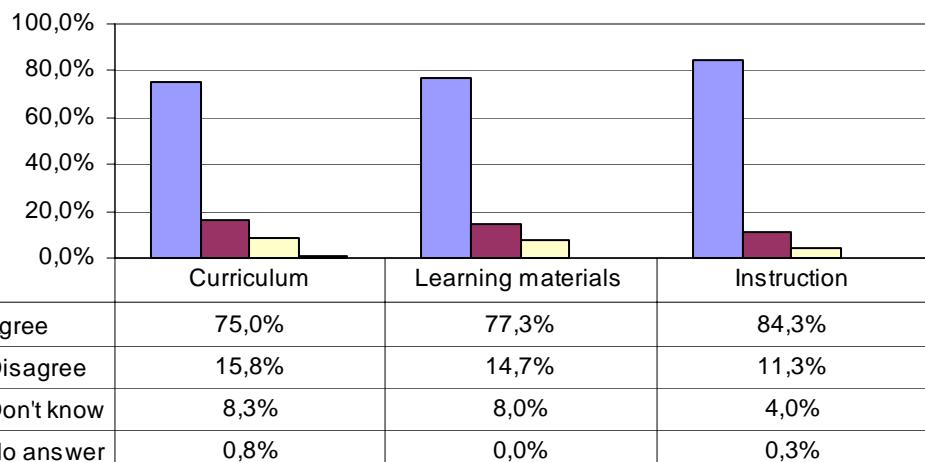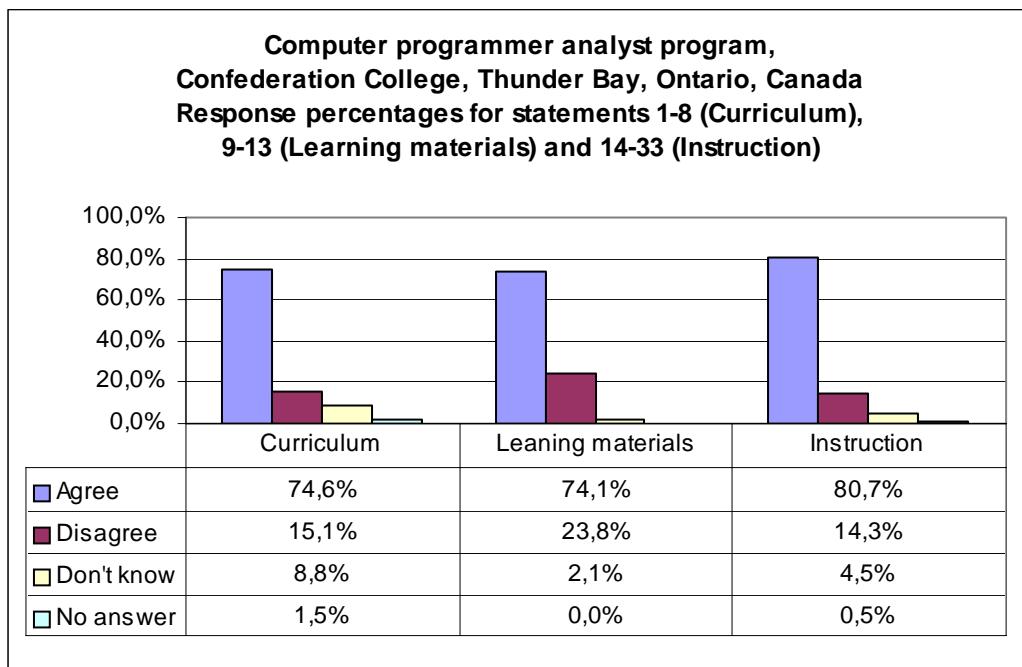
Discussion

The value for both the mode and the median for the Cracow School of Information Technology, Durham College and Confederation College sample distributions is 1 which means that category Agree contains the highest number of answers and is the point in each of the distributions where 50% of the sample falls below and 50% falls above (see Figures 1-4).

The value for the mean is greater for the Polish sample distribution than for either the Confederation or the Durham one: 1.5 and 1.6 (2nd year students only), 1.3 and 1.2, respectively (see Figures 1-4). This means that the Polish learners were more likely to choose category Disagree than their Canadian counterparts and that the average response for each of the three groups of students lies between designations Agree and Disagree.

The value for the standard deviation is smaller for both of the Canadian distributions than for the Polish one: .3 (Confederation), .3 (Durham) and .5 (Cracow School of Information Technology (see Figures 1-4). This signifies that the spread of answers for the Polish distribution is larger around the mean than for either of the Canadian ones.

Response percentages for statements 1-8 are higher for category Agree and lower for designation Disagree for both the Confederation and the Durham students (74.6% and 15.1% and 75% and 15.8%, respectively) than for the Cracow School of Information Technology respondents (64.1% and 20.3% and 58.3% and 22.9%) (second year students only) which implies that the Polish information technology curriculum was not as highly valued by learners as the Canadian ones (see Figures 5-8).

With regard to statements 9-13, the percentage of answers is higher for designation Agree and lower for category Disagree for both the Confederation and the Durham respondents (74.1% and 23.8% and 77.3% and 14.7%, respectively) than for the Polish sample: 56.3% and 33.1% and 47.8% and 38.9% (second year students only) (see Figures 5, 6, 7 and 8). This indicates that the learning materials that are used in the Cracow School of Information Technology program were not highly regarded by students as those employed in the Canadian ones.

Likewise, instruction was not as highly valued by the Polish respondents as it was by their Canadian counterparts given that response percentages for statements 14-33 are higher for category Agree and lower for designation Disagree for both the Durham and the Confederation participants (84.3% and 11.3% and 80.7% and 14.3%, respectively) than for the Cracow School of Information Technology ones (60.3% and 25.8% (second year students only) and 62.5% and 23.9%) (see Figures 5-8).

Figures 5-8 illustrate that the percentage of Polish students who decided upon designation Don't know for assertions pertaining to curriculum, learning materials and instruction is higher in each case than for their Canadian tallies: 13.7%, 10.6% and 13.4% as opposed to 8.8%, 2.1% and 4.5% and 16.7%, 13.3% and 13.9% (second year students only) as opposed to 8.3%, 8% and 4%. This indicates that the Cracow School of Information Technology learners had less information about their program than their Canadian counterparts.

The percentage of Cracow School of Information Technology, Durham and Confederation learners that did not choose a category (No answer) for statements 1-33 ranges from 0-2.1 suggesting that the level of interest shown by the information technology program participants in our investigation in both Canada and in Poland was very high (see Figures 5-8).

Concluding Remarks

This study compared Canadian community colleges with post-secondary (grammar) vocational schools in Poland. The comparison concentrated upon programs in information technology that are delivered by one Polish school Cracow School of Information Technology and two Canadian community colleges: Durham and Confederation .

 Our results indicate that both the Polish and the Canadian students valued their programs given that answer category agree is the most popular one for all of the samples and is the point in each of the distributions where half of the sample falls below and half falls above. However, response percentages for the three program areas and the value for the sample means suggest that Durham and Confederation learners held their programs in higher esteem than their Polish counterpart. This might be due to the fact that colleges in Canada are higher up in the school structure 'pecking order' than post-secondary vocational schools in Poland: post-secondary as opposed to secondary. (Academic achievement is valued in terms of school structure, King,1979, 55).

Learner evaluations of teaching (as well as of curriculum and learning materials) are 'subjective by nature', so we ought to keep this in mind when making use of them (Adams).They might be influenced by grades received. Furthermore, the Polish students in our investigation might not have been as objective in their evaluations of instruction as their Canadian counterparts for linguistic reasons. In the English language, teaching and learning are considered to be two very different activities[2] whereas in Polish there is 'a faint connotation ' that learning occurs as a result of another persons efforts. (Jankowicz, 2001, 86).[3]

Are post-secondary vocational school and college students qualified to evaluate instruction? It has been suggested that evaluations are a 'measure of student satisfaction', which is an aspect of faculty performance (Adams). Because formal learning is now a lifelong process (due to rapid advances in technology), it is therefore important for learners to be satisfied with their teacher's performance so that they will have a liking for education.

Given that Poland has recently entered the European Union, it would be useful to compare post-grammar vocational schools with their counterparts in EU member states. It is recommended that additional research be carried out, in the future, involving a larger number of institutions.

Notes

1. It should be noted that Durham was asked to restrict their sampling to second year students due to the anticipated completion date of our research.

2. The same can be said for French (enseigner-apprendre) and German (lehren-lernen).

3. In Polish *uczyc* means to teach and *uczyc sie* means to learn.

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