

RETURN ON INVESTMENT ANALYSIS OF INTERNATIONAL EDUCATION



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BCCIE

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1. Executive Summary

This paper reports on a research project examining the application of Return on Investment (ROI) analysis methods to the concept of International Education (IE). The project was managed by the British Columbian Centre for International Education, funded by Human Resources Development Canada, and undertaken by FuturEd Inc. Project activity included assembling an advisory committee of IE experts, linking the ROI literature to international education, completion of three exploratory case studies, production of this report including ROI tools and advice, and presentation of the work to educators in BC.

In order to undertake the case studies, it was necessary to develop an inclusive list of potential IE activities from which to select three, and lists of potential investment costs and returns to explore. While a ROI perspective can be from the student, the institution, the government and/or society at large, we focused on the institutional perspective only. The study of ROI can include both tangible and intangible measures, and focused on seeking monetary measures while respecting the importance of non-monetary costs and returns. At Simon Fraser University, we studied student mobility; at BCIT, we examined contract training; at Richmond School District, we analyzed international student recruitment. All were able to demonstrate positive ROI using the tools we created, and a variety of related issues emerged for future research.

From the case study approach, we concluded that ROI analysis is possible and revealing; however, the sample was far too small to draw conclusions about actual ROI. Much more research is needed to determine ROI for each type of IE activity and to draw comparisons between types and other investment options.

The purpose of this project has been to generate a defensible method of accounting for IE expenditures and policies. On the basis of the case studies, a simple method of ROI analysis has been developed for use by any and all who are interested in demonstrating return on investment. Considerable resources are available to those who wish to explore the concept further.

2. Project Overview

2.1. Introduction

In December, 2002, the British Columbia Centre for International Education (BCCIE) was awarded a Human Resources Development Canada (HRDC) contribution agreement under the Special Initiatives Program to undertake a project entitled "Return on Investment (ROI) Analysis of International Education". The purpose of this project was to draft, pilot and refine tools and guidelines for utilizing the "Return on Investment" (ROI) methodology for developing cost/benefit analyses of International Education (IE) initiatives. The start date of the project was January 6, 2003 and the completion date was March 31, 2003. The project was managed by BCCIE and the research undertaken by Dr. Kathryn Barker, President of FuturEd Inc.

2.2. Project Details

2.2.1. Project Objectives

The project had the following three objectives:

1. capacity building within Canadian post-secondary education sector by providing institutions with an example of a new model (ROI) for analyzing the actual costs and returns to IE;
2. advancing understanding of the tangible and intangible costs and benefits of academic mobility and other IE policies and practices; and
3. promoting creative and innovative approaches to IE by fostering research and analysis of ROI options and approaches.

The achievement of these objectives is a long-term goal, and this project is viewed as Phase One of an ongoing research and development agenda.

2.2.2. Key Activities

To achieve the objectives, project activity aimed to:

1. establish and meet with an advisory committee with government and education leaders and formal and non-formal education providers, both secondary and post-secondary IE professionals;
2. generate pilot "Return on Investment" tools to be applied in the case studies, and possibly refined based on the results of the case study research;

3. conduct case studies with attention to a) applying the same model to all case studies; b) modifying the model and noting the changes in results; c) preparing comparable case study reports;
4. prepare a report for distribution within the post-secondary education community in Canada containing:
 - an environmental scan of current literature,
 - ROI methods appropriate for use in various IE contexts,
 - conclusions, issues and policy implications related to the use of ROI, and
 - preliminary identification of ROI benchmarks for IE that could be applied on a broad scale; and
5. evaluate the project and identify possible next steps.

Project activity was a shared responsibility of BCCIE and FuturEd, and the activities have all been completed, although there are obvious limitations to the conclusions.

2.2.3. Intended Outcomes

BCCIE and FuturEd have hypothesized that the analysis and demonstration of Return on Investment (ROI) in International Education (IE) will contribute to the enhancement of IE policies and practices in Canadian public education and training institutions at all levels, and in other stakeholder organizations, by providing an additional tool to measure and assess costs and returns of various initiatives. The specific intended short-term outcomes of the project were to develop:

- through a number of comparable case studies, a field-tested method for analyzing and demonstrating ROI for IE; and
- a report, for distribution, outlining a new method for analyzing the costs and returns of International Education, as compared potentially to competing priorities and initiatives at the institutional level.

These outcomes have been achieved.

2.3. Rationale

The rationale for this project lies at the intersection of two concepts:

- Return on Investment as a method of demonstrating accountability for defensible policies and practices; and
- International Education as an expression of education and human resource development practice.

2.3.1. Introducing Return on Investment Analysis

Return on Investment (ROI), strictly speaking, is an accounting-based method of comparing the costs and benefits of an endeavor or enterprise by converting all costs and benefits to financial measures. It can be used, however, in a less stringent manner to include intangible costs and benefits, and this is particularly important when the endeavor is within the education/training environment.

A theoretical exploration of ROI reveals that it is linked to a large number of concepts, some of which are:

- formal financial accounting: investments, assets, capital, growth, risk and return in business;
- human resources development;
- productivity measurement, industrial engineering, quality management;
- organizational psychology and decision theory;
- human capital assets, accounting, and management;
- evaluation (program, training, learning) for comparison of interventions and for accountability;
- outcomes and impacts (training, learning, intended and unintended, short-term and long-term, positive and negative, different stakeholders);
- social costs and benefits of education/training as a form of human capital development; and
- career development, higher education/training for the individual.

Terminology is sometimes confusing and redundant, and ROI is a term that is used almost synonymously with many other terms, such as:

- evaluation: the formal process of assessing the quality of a product or service against standards for acceptability and/or excellence;
- validation: the process of ensuring acceptability for continuance of a program or service;
- “proof-of-concept” – used, e.g., by the US Office of Veterans Affairs, to mean the process of seeking evidence to support or refute a new concept;
- cost-benefit analysis or benefit-cost ratio;
- cost-effectiveness, with effectiveness being defined as the extent to which the product/service does what it claims to or is intended to vis-à-vis the associated costs;
- cost-utility analysis, with utility related to organizational or business objectives;

- return on expectation (ROE): examines the perceived market value of training compared to program costs;
- value for money: the extent to which public funds are expended economically and efficiently and the extent to which the related programs are effective in meeting their objectives;
- education/training investment analysis: a forecast of monetary benefits that are likely to be gained from training made before the training is undertaken; and
- education/training transfer which may be part of the training plan or part of the intended outcomes/benefits.

These concepts underpin the effort to better understand the costs and returns associated with education/training in general and International Education in particular.

A thumbnail sketch of ROI in education/training would start with typical program development and delivery costs, for institutions and others who provide for teaching/learning systems, which might fall into these general categories:

- course/curriculum development or purchase;
- instructional materials;
- equipment and hardware;
- facilities;
- marketing or promotions;
- evaluation;
- salary (instructor and support staff); and
- administrative costs.

Students make direct and indirect investments of time, money and energy. Society makes similar direct and indirect investments.

The returns to investing in education/training are experienced differently by students, educators and institutions, governments and society at large.

2.3.2. Introducing International Education

International Education is a complex education and training endeavor. It takes a number of forms, e.g., student and faculty exchanges, collaborative research projects, contract training, recruitment of international students, internationalizing curriculum and institutions. It is undertaken for a number of reasons, e.g., financial gain for institutions, employability and global

citizenship skills for students, global understanding and collaboration for all. At the broadest level, International Education can be construed as a specific endeavor within education, workforce development and export development enterprises.

While few would argue the merits of IE for Canadians individually and collectively, there is a need to study and demonstrate the costs and benefits of IE, both tangible and intangible, from the perspective of providers and consumers. On one hand, costs and benefits – both tangible and intangible – may be very different between types of IE programs and services; and on the other, there should be commonalities that allow for the comparison between types of service and utilization.

In support of IE programs of all types and all levels, and in the face of competing priorities for education funds and clients, providers and policy makers are anticipating this project will help frame and tabulate the actual costs and benefits associated with the service.

2.3.3. Combining Expertise in ROI and IE

To this project, BCCIE brings an established leadership and organizational capacity in IE. FuturEd has established expertise in both IE and ROI. As a basis for this project, FuturEd contributes:

- a model for studying ROI of IE¹ within the Consumer's Guide to ROI²;
- the experience of three case studies of ROI for training within different industry sectors³; and
- an understanding of policies, practices and intended outcomes of IE⁴ for both Canadian students and international clients.

This project, then, is a follow-up to several FuturEd projects to tailor ROI upon principles and practices to the education and training environment, and builds upon the many endeavors promoting the value and importance of IE by the BCCIE. It is conceived as a prelude to further,

¹ Barker, K. (2001). *Return on Investment: An Environmental Scan and Literature Review*. Ottawa: The Alliance of Sector Councils / FuturEd. [On-line]. Available: http://www.councils.org/1newsroom/pdf/ROTI_Background_e.pdf

² FCSN (2001). *Consumer's Guide to Return on Training Investment* created by FuturEd; available at www.FuturEd.com

³ Barker, K. (2002). *Why Train? Return on Investment in Training: Three Industry Case Studies and Development of a Workbook*. A project hosted by the Open Learning Agency and funded in part by the Industry Training and Apprenticeship Commission (ITAC in BC); available at www.FuturEd.com.

⁴ Barker, K. (2001) *Blending ICT and International Competencies*. Ottawa: Canadian Bureau of International Education.

in-depth studies of Return on Investment in IE that may be used to support investment in IE policies and practices in Canada. In summation, analysis and demonstration of ROI in IE may have the impact of enhancing the understanding of and expansion of Canada-based IE in the global society and economy.

2.4. Assumptions and Limitations

2.4.1. Delimiting the Study

This project was intended to be preliminary research exploring the application of ROI principles to a specific type of education endeavor. It was not intended to be inclusive, but merely illustrative. It examined the hypothesis that there is, indeed, return on investment in international education. An underlying premise was that similar IE endeavors are undertaken at all levels of public education in Canada, and that they should all be included in the study. A representative was sought from K-12, university and adult training (technical institute) institutions.

This project was limited by a short timeframe and a fixed budget, therefore the research was pragmatically delimited by geography, sponsor, IE type, scope, perspective and methodology.

- While IE is undertaken across Canada, the research was limited to British Columbia.
- While IE endeavors are sponsored by all forms of learning systems - publicly-funded, private not-for-profits, and commercial enterprises - this research was delimited to publicly-funded education enterprises.
- While IE takes a wide variety of types, this study was delimited to three types - contract training, international student recruitment, and “student mobility” field schools. These were deliberately selected after discussion of the following list of possibilities:
 - international students coming to Canada (full courses/programs)
 - Canadian students abroad (partial programs)
 - student exchange (short-term)
 - staff exchange
 - research projects
 - Canadian courses delivered abroad
 - e-learning courses for Canadians
 - e-learning courses for international students
 - internationalizing local curriculum
 - internationalizing the institution
 - international office for student advising, e.g., immigration

- international internships (work/study abroad)
 - volunteer programs
 - contract training
 - sale of curriculum
 - consulting and advising, and
 - institution building.
- While ROI can be analyzed from various perspectives - students, employers, the Canadian economy, individual institutions, provinces - the scope of this study was delimited to the institutional perspective.
 - While ROI data gathering may be exhaustive, requiring extensive evidence and measurements, this study was delimited to the data provided by informed participants, i.e., administration responsible for the IE endeavors under study.

Despite the limitations and within the delimitations, the study was expedited by an informed advisory committee and cooperative participating institutions that each helped remove barriers to timely data gathering.

2.4.2. ROI Assumptions and Delimitations

Return on Investment analysis in the context of learning systems is, strictly speaking, an accounting-based method of comparing the costs and benefits of education/training by converting all costs and benefits to financial measures. Some simple ROI formulae⁵ include:

- for one-time programs

$$\text{Program Returns} / \text{Costs} \times 100 = \text{ROI}$$

- for prepared programs

$$\text{Design} + \text{development} + \text{duplication} + \text{delivery} + \text{support} / \# \text{ of students over the life of the course}$$

- for a range of results

$$\text{ROI} = (\text{value of benefits} - \text{cost of training}) / \text{cost of training}$$

For purposes of this study, the first model is used.

⁵ *Raise Your Training ROI* (Chase, 1997) in Quality On-line at <http://www.qualitymag.com/articles/1997/sep97/0997f3.html>

As with all models of ROI analysis, the exploration of costs and returns is very complex as either and both may be:

- tangible / measurable and/or intangible / difficult to measure
- immediate / short-term and/or evolving / long-term
- positive and/or negative
- intended or planned and/or unintended but achieved
- once-off and/or ongoing
- targeted for new students and/or experienced students and/or employees
- of equal value or prioritized in importance, and
- essential and/or optional.

For purposes of this study, the focus has been on readily available and obvious tangible costs and benefits that are positive, planned and ongoing.

Both education/training costs and benefits may be of three types: one-time (e.g., needs analysis and design); cost per offering (e.g., facilities rental, consulting fees); and cost per participant (e.g., meals, notebooks). For purposes of this study, each of the types forms the basis for ROI analysis.

2.5. Data Gathering and Analysis

In order to achieve project goals, BCCIE and FuturEd set out, within the limitations of the study, to:

- conduct ROI analysis, as research, using the Consumer's Guide to ROTI⁶ (FuturEd, 2001) as a starting point, for three different types of international education endeavors;
- learn from the process, and to create a workable ROI model that applies to most or all IE endeavors; and
- share both the IE ROI analysis and the lessons learned to further understanding and application of ROI in learning systems.

⁶ Return on Training Investment

2.5.1. Data Sources

The following three public education institutions agreed to participate:

- Richmond School District, representative of K-12 and illustrative of international student recruitment;
- Simon Fraser University, representative of post-secondary academic preparation and illustrative of student mobility; and
- British Columbia Institute of Technology, representative of adult skills development and illustrative of contract training.

Each institution agreed to focus on an IE activity that was clearly defined and one in which information gathering was possible.

2.5.2. Data Gathering Processes

Data gathering processes took the following steps:

1. BCCIE and the advisory committee selected the case studies and made the necessary introductions for FuturEd.
2. FuturEd met with institutional representative with responsibility for IE to:
 - run through ROI lists and gather readily available information;
 - identify information that can be assembled by the institution; and
 - identify Return on Training Investment (ROTI) related issues, barriers and recommendations.
3. FuturEd received data electronically from the case study participants, and drafted case study reports and individual ROI analyses for each institution.
4. FuturEd prepared case studies including ROTI analysis, identified issues and changes, and submitted a draft to BCCIE and the advisory committee.

2.5.3. Data Analysis Plans

The final steps involved analyzing the data for:

- actual ROI per IE type;
- comparative ROI between IE types;
- similarities and differences of costs and benefits between types; and
- ROI issues to be addressed in future research.

In addition, there was an interest, on the part of the Advisory Committee, to further explore intangible benefits in general and in four specific categories: institutional reputation

strengthening, contribution to human capital building, professional development for staff, and contribution to solving domestic enrolment fluctuations.

2.6. Qualities of a Good ROI Plan

The following may be qualities of a good ROI plan:

1. utility — Is it practical and useful?
2. feasibility — Is it doable? How much time does it take?
3. ethicality — Does it respect legal and ethical issues?
4. accuracy — Is it honest and technically sound?
5. acceptability — Is it agreed upon by all stakeholders?
6. efficiency — Is it cost effective relative to the cost of the training?
7. adaptability — Can it be used for different types of training?
8. inclusiveness — Does it address a range of measures and information sources?
9. flexibility — Can it be used before, during, and/or after training?
10. effectiveness — Does it meet a need for information?
11. credibility — Is it believable?

These became the criteria for evaluating ROI analysis endeavors in general, and this project and case studies in particular.

3. ROI and IE: Environmental Scan

The following is a brief discussion of the context of this study, including the notion of “returns” to education, and the status of ROI analysis for education and training in general and IE in particular.

3.1. Return on Investment in Education

Investments are made in education, by society, for a number of reasons and social returns. According to the Organization for Economic Cooperation and Development (OECD), education and training contribute to better public health, lower crime, the environment, parenting, political and community participation, and social cohesion.⁷ For individuals, there is considerable evidence that higher education results in increased lifetime income, individually and collectively.⁸

Numerous writers in the field of cost analysis in education make a strong case for increasing the use of ROI so that administrators can make decisions about how resources can best be allocated and used. According to Woodhall,⁹ for example, cost analysis in education can serve the following purposes:

- testing the economic feasibility of expansion plans, proposals, or targets;
- projecting future levels of educational costs;
- estimating the cost of alternative policies and of educational reforms or innovations;
- comparing alternative ways of achieving the same objective in order to select the most efficient or economical;
- comparing the profitability of alternative investment projects; and
- improving the efficiency of resource utilization;

Cost analysis has wide applicability in the field of education but, unfortunately, has not been used extensively because its opponents argue strongly that education objectives are too indefinable, learning attainments too immeasurable, and educational benefits too imponderable to make any such analysis possible.

⁷ *Counting Human Capital* (Healy, 1998) in the OECD Observer at <http://www.oecd.org/>

⁸ *Does It Always Pay to Invest in a Postsecondary Diploma?* (HRDC, 2000) is available at http://www.hrdc-drhc.gc.ca/arb/publications/bulletin/vol6n1/v6n1_09e.shtml

⁹ *Cost Analysis in Education*. (Woodhall, 1987) In G. Psacharopoulos (Ed.), *Economics of Education: Research and Studies*, 1987, pp. 393-399.

3.2. Growing Interest in ROI in Learning

Interest in or reasons for ROI in learning vary according to the needs of the stakeholder group: education institutions, students, employers and governments, i.e., society at large. Some educators are increasingly concerned with demonstrating ROI for the following reasons:

- dealing with economic pressures to increase effectiveness of education and training programs;
- gaining information useful in marketing education/training products and services;
- developing an effective way of increasing influence within the organization, enhancing program results, and measuring the contribution of programs in terms that senior management can appreciate;
- helping education/training staff contain costs and maximize education/training benefits;
- giving educators and trainers solid data about where education/training is effective and where it is weak, so they can revise and fine-tune courses for best results; and
- motivating educators/trainers to do additional evaluations beyond the “smile sheet”.

In the context of "good practice", education/training providers such as technical institutes and colleges are advised to incorporate the principles and practices of ROI. For example, to win a Malcolm Baldrige Award for Excellence in Education,¹⁰ the requisite core values and concepts that comprise excellence are visionary leadership; learner-centered education; organizational and personal learning; valuing faculty, staff and partners (i.e., providing training and professional development); agility; focus on the future; managing for innovation; management by fact; public responsibility and citizenship; focus on results and creating value; and a systems perspective.

Increasingly, education/training providers are concerned with ROI to their institutions or agencies of new programs and approaches. For example, the TeleLearning Network of Centres of Excellence funded studies assessing the costs and benefits of tele-learning for Ontario Institute for Studies in Education (OISE), UBC and other universities.¹¹ The ROI analysis has not been for the learner, but for the institution, given the significant resources required to move from the traditional classroom delivery to technology-assisted, web-based delivery.

¹⁰ At <http://www.quality.nist.gov/>

¹¹ *Assessing the Costs and Benefits of Telelearning: A Case Study from the University of British Columbia* (Bartolic-Zlomistic and Bates, 1999); *Assessing Costs and Benefits of Telelearning: A Case Study from the Ontario Institute for Studies in Education of The University of Toronto* (Bartolic-Zlomistic and Brett, 1999); *Cost Benefit Analysis of Web-Based Telelearning: Case Study of the Bell Online Institute Pilot Project* (Whalen and Wright, 1998)

Students are increasingly interested in ROI in learning as well. One reason is the potential to increase one's financial worth to an employer, perhaps to obtain a pay increase or promotion. According to HRDC, the decision to advance one's education is similar to the decision to invest in a financial asset. From a recent study by the Applied Research Branch,¹² it has been concluded that:

- pursuing postsecondary studies is generally a financially profitable decision for individuals;
- profitability varies considerably with the economic cycle, the type of diploma earned, the field of study, and some individual factors; and
- individuals weigh both the benefits they will derive from postsecondary studies – higher anticipated earnings – and the costs – tuition fees, loss of earned income while studying.

The Austin Business Journal notes that there is nothing more important than individual commitment to and accountability for training returns.¹³ In several provinces, students are urged to examine ROI for their own purposes using the questions in *Choosing the Training You Need*.¹⁴

Among reasons why governments and society at large are increasingly concerned with demonstrating ROI in learning are the following:

- given current demographics and the changing nature of work, pressures on the infrastructure are intensifying to improve both the equity and effectiveness of investments in education and training;
- parliamentarians need simple, balanced reporting to help them allocate funds;
- employers and businesses, concerned with productivity, pressure education/training providers and governments to increase the effectiveness of education and training programs;¹⁵ and
- according to the OECD,¹⁶ public accounting systems lag in their ability to adequately demonstrate the importance of education and training investment.

¹² *Does It Always Pay to Invest in a Postsecondary Diploma?* (HRDC, 2000) is available at http://www.hrdc-drhc.gc.ca/arb/publications/bulletin/vol6n1/v6n1_09e.shtml

¹³ *What is the Return on Investment in Training?* (Thompson, 1999) in the Austin Business Journal.

¹⁴ Developed by FuturEd with funding from HRDC, the guide is based on the recommended National Training Standards developed by the Canadian Labour Force Development Board. *Choosing the Training You Need* is printed and distributed by the governments of BC and New Brunswick; and it is available online at <http://www.futured.com/>

¹⁵ *Why Train? Calculating Return on Investment*. (Barker, 2002) at www.futured.com

¹⁶ *Human Capital Investment* (OECD, 1998) in OECD New Issues at <http://www.oecd.org/>

The OECD, in fact, calls education and training - on the macro/governmental level - an intangible investment, and it is conducting major efforts to measure intangible investment as it relates to the Knowledge-based Economy.¹⁷

3.3. Return on Investment in International Education

This study has been undertaken because there is limited data relative to the returns on investment in International Education. Four studies do, however, assert that there are returns to individuals, to society at large, and to institutions.

In a study comparing on-line and on-site delivery of International Education by Canada's public post-secondary education (PSE) institutions,¹⁸ undertaken by FuturEd for the Canadian Bureau for International Education (CBIE), students, educators and employers were asked to compare the acquisition of IE competencies in each teaching/learning environment. Within the limitations of this study, the following hypotheses were supported:

1. Canadian undergraduate students engage in IE for at least two reasons: preparation for work in international settings and/or preparation to be good global citizens; PSE providers offer IE for those two basic reasons.
2. There is a set or list of International Competencies learners should expect to acquire or demonstrate, created by CBIE and FuturEd (December 2001), and they are the same regardless of perspective - learners, educators and employers.
3. There are different outcomes and success indicators associated with on-line and on-site learning delivery, and one may be superior to the other from either the learner, provider or employer perspective. Learners acquire different sets of competencies in each environment. Learners require different competencies to succeed in each environment.
4. Both learners and providers concern themselves with costs, and often seek the most effective and affordable learning environment. The costs of on-line and on-site delivery are different. The effects or outcomes of on-site and on-line delivery are different.
5. One form of IE delivery may be better than another in terms of the competencies acquired by learners and/or associated with the planned use of the International Competencies (employment skills and career progression versus broadened understanding).

¹⁷ OECD Work on Measuring Intangible Investment at <http://www.oecd.org/>

¹⁸ *Studying the Use of ICT in International Education: Comparing On-Site and On-line Delivery of International Education, Phase 4 Research Report* (Barker, 2002) at <http://www.cbie.ca/>

The following hypothesis is unconfirmed: one form of IE delivery may be better than another in terms of cost-effectiveness for PSE providers. Clearly, more research is needed in this area.

In a second and much larger study in 1999, the Conference Board of Canada studied the economic impacts of international students using two measures: (1) student outflows relative to Canada's Gross Domestic Product (GDP) and (2) aggregated student flows relative to "innovation."¹⁹ For this study, the national economic performance indicators were:

- Gross Domestic Product (GDP);
- innovation, i.e., trade in disembodied technologies;
- international trade; and
- foreign direct investment.

On this basis, the economic benefits to Canada were determined to be improved knowledge flows; better transfer of disembodied technologies and ideas learned abroad; increased understanding of foreign market opportunities; and enhanced development of cross-cultural competencies for global and domestic business. This may be viewed in the context of the 1998 federal government support for IE initiatives of \$.80 per capita compared, e.g., to US \$4.70, Australia \$9.07.²⁰

In a review of the economic impact of international education in BC's public post-secondary sector,²¹ a BC Ministry of Advanced Education, Training and Technology commissioned report concluded that International Education has been a valuable generator of income to the province with potential for further economic benefits. In addition, the presence of international students in BC results in:

- involvement of some of the best and brightest international scholars in research and development at BC institutions, primarily at the graduate level;
- long-term business contacts, networks and personal friendships between international students, their former classmates, teachers and work experience sponsors;

¹⁹ *The Economic Implications of International Education for Canada and Nine Comparator Countries: A comparison of International Education Activities and Economic Performance* (Conference Board of Canada, 1999)

²⁰ *Turning the Forces of Globalization to our Advantage: An International Learning Strategy for Canada* (AUCC, ACCC, CBIE, WUSC, ICCS et al., 1998)

²¹ *A Review of the Economic Impact of International Education in British Columbia's Public Post-Secondary Sector* (Adams and Tait, 1999)

- familiarity with Canadian companies, technology, equipment and practices by international students who later assume positions of leadership and responsibility in their own countries; and
- opportunities for domestic students to develop an international perspective on social and economic issues through interactions with international students in formal and informal learning environments.

In 1996, the University College of the Cariboo²² conducted a study on the economic impact of international students in its community and concluded that international students generate revenue in the areas of:

- fees to the institution;
- travel;
- tourism (e.g., family/friends coming to visit international students);
- employment (inside the institution and within city, e.g. restaurants, stores);
- general retail (goods and services in the community); and
- revenue to Canada (i.e., the domino effect created when students buy items; also multiplier effect across Canada, as many purchases are made outside city).

In conclusion, this information contributed to the research design and analysis.

²² *The Economic Impact of International Student Enrollment in Post-Secondary Institutions: The Case of a Small Canadian City* (Seldon, 1996)

4. International Education Case Studies

This section contains the three case studies undertaken to examine Return on Investment in International Education in the spring, 2003.

4.1. Contract Training Case Study

4.1.1. The International Education Provider

The British Columbia Institute of Technology (BCIT) in Burnaby, BC specializes in career-training and technical education at the adult and post-secondary level. BCIT offers a full range of learning opportunities in full-time and part-time studies through eight program areas, as well as advanced training, distance and online learning, and industry training.²³

Within the institution, BCIT International develops and coordinates international activities with industry, government agencies and other agencies in BC, Canada and overseas.²⁴ This agency or department of BCIT provides student training, institutional strengthening, needs assessment, project design and management, curriculum design and development, instructor training/train the trainer, corporate training, and international credentials for international clients. BCIT International is involved in international development projects, contract education training and related international training and economic development activities. These international education activities are varied, but they link in tangible and intangible ways and result in a complex and interrelated set of investments and returns.

4.1.1.1. The Type of International Education

“Contract training” is a common form of International Education, and it can take place at the client’s location, at the Canadian institution, and/or using distance education. Contract training is typically undertaken for revenue generation first, and philanthropic purposes second. BCIT International has a mandate to generate revenue for the institution and, at the very least, must operate on a cost-recovery basis.

In this case study, we examine a particular contract training endeavor delivered by a Canadian public post-secondary institution to clients in an international setting. Specifically, we study the Instructional Skills Workshops delivered by BCIT to instructors at Centro de Entrenamiento Industrial y Minero, a technical college in Chile.

²³ Information taken from the BCIT website at <http://www.bcit.ca/>

²⁴ Information taken from <http://www.international.bcit.ca/>

Since 1998, BCIT has been involved with the development of a Technical College in Antofagasta, Chile by Minera Escondida Limitada. They have been contracted to train Chilean faculty to deliver trades programs based on the Canadian Technical Apprenticeship System in the Millwright, Heavy Duty Mechanic and Electrical trades. BCIT continues to provide technical assistance to the technical college now named Centro Tecnico Escondida. As part of that project, BCIT has delivered Instructional Skills Workshops to the local instructors. These workshops are part of the British Columbia Instructional Diploma Program (BC IDP).

4.1.1.2. Details of the IE Activity

Using curriculum and materials developed in BC, BCIT instructors or contract trainers travel to Chile to deliver workshops. Each “train the trainer” session runs for six weeks, often broken into phases because many of the trainees are full-time instructors themselves who cannot take six weeks off to attend a course. For each session, one instructor or contract trainer travels from Canada to fulfill the contract.

The BC Instructional Diploma Program is designed to provide instructors with the opportunity to increase their skills in planning and development of effective adult education courses and programs, delivery of instruction using a variety of techniques and methods, educational psychology and philosophy, design and use of instructional media, evaluation of learning, and evaluation of instruction. When they have finished, Chilean instructors have earned the BC IDP certificate.

4.1.2. ROI Analysis

4.1.2.1. Perspective

While the ROI could be studied from the perspective of the Chilean instructors, the Chilean college or mining industry, the perspective for purposes of this study is BCIT. Specifically, we examine what BCIT has invested and what the returns for that investment are relative to the Chilean IDP training. As stated earlier, this IE activity is not completely discrete from other BCIT International IE contracts and activities.

4.1.2.2. Unit of Analysis

Options for the unit of analysis in this case study might be per training course, per client or per year. For this case study, we use “per course” as the unit of analysis because the data is readily available, specifically for the course offered from January to March 2003. A typical course runs

for six weeks with one Canadian instructor, and this particular contract has taken the form of three weeks of training in early January and three weeks in March. BCIT International typically offers two sessions per year.

4.1.2.3. Costs

Costs typically fall into two categories: tangible and intangible. Both are important to and acknowledged by public post-secondary education institutions. However, ROI analysis focuses on the tangible costs or those that can be measured and quantified; and all costs must be included to do an acceptable ROI analysis. In this case study the following tangible costs have been tabulated by the staff at BCIT International.

ITEMS	COSTS
Travel and accommodation (1 person / 6 weeks)	12,000
Teaching salary (six weeks, including preparation time)	15,000
Final assignments marking (BCIT contractors)	3,200
Instructional materials (printing and production)	2,000
BCIT administration fee (administrative overhead)	8,000
VCC registration fee	<u>250</u>
TOTAL	\$40,450

Some typical IE costs are not included in this tabulation. For example, the client development and maintenance costs, inherent in all IE endeavors, have been absorbed within the larger Chilean contract.

4.1.2.4. Returns

As with costs, returns are both tangible and intangible. Clearly, in the context of contract training, tangible benefits are paramount, i.e., the work is done for financial gain. The return to BCIT in this case study is \$56,000 (CAN) paid by the client for training services.

In addition, the intangible but important returns for BCIT include:

- faculty development opportunities in lieu of professional development;
- international development and business opportunities;
- Spanish curriculum to be reused/resold;
- expansion to Latin America market (Brazil, Argentina, Mexico, Peru);
- long-term partnership with the client institution;

- revenue over several years; and
- successful business relationship with a large multinational business.

Intangible returns are important, but they do not contribute directly to ROI analysis unless and until they can be quantified and translated into dollar values. This is typically very challenging.

4.1.3. ROI for IE Contract Training Example

ROI analysis is an accounting-based method of comparing the costs of training to the benefits. It requires that tangible costs and benefits be converted to dollar values. In the case of contract training, ROI addresses the question: “For every dollar invested in the training contract, how many dollars does the training institution get back?” ROI is expressed as a percentage generated through this formula: $\text{Training Contract Returns} / \text{Training Contract Costs} \times 100 = \text{ROI}$.

On this basis, the Return on Investment, to BCIT is 138% per training session ($\$56,000 / \$40,450 \times 100$) . For each dollar spent on one session of IDP training in Chile, BCIT accrues a return of \$1.38 in purely financial gain.

4.1.4. Case Study Issues

From this case study, two issues emerged. First is the relationship between ROI analysis and “trade secrets.” The contract training market is highly competitive, and institutions may be reluctant to reveal their actual expenses and prices for international contract work. Expressing the conclusions as ROI is a relatively anonymous way of reporting and comparing this kind of international education endeavor.

The second issue is the relationship between IE activities within and among education institutions. ROI analysis is made difficult by the simple fact that investments in one type of IE activity may result in returns to other or all IE activities. Relationship building and maintenance is a good example. In this ROI analysis, the cost of developing and maintaining the relationship between BCIT and the Chilean college is tangible but not factored in, while the benefit of an established long-term working relationship is intangible but clear.

4.2. International Student Case Study

4.2.1. The International Education Provider

The Richmond School District (RSD) is located in Richmond, British Columbia, Canada, a city of 140,000 adjacent to Vancouver.²⁵ It is a public school system serving approximately 13,500 elementary students and 11,000 secondary students. British Columbia is proud of an international reputation for high quality public education. This has been turned to market advantage by RSD and many others, as students and parents beyond Canada seek out alternatives to their local education systems.

4.2.1.1. The Type of International Education

Recruitment of international students is a common form of International Education, with delivery of learning services taking place at the client's location, at the Canadian institution, and/or using distance education. International student recruitment is typically undertaken for revenue generation first, and philanthropic purposes second.

In this case study, we examine a particular international student recruitment endeavor delivered by a Canadian public education institution to clients in Canada. Specifically, we study the International Student program of RSD, one of many BC school districts which have policies and programs to generate revenue for the individual school districts through international student recruitment. At RSD, International Education must operate on a cost-recovery basis. The total IE endeavor at RSD includes an International Student Program, specialized ESL training, some sale of curriculum, student and faculty exchanges, and global services through e-learning.

4.2.1.2. Details of the IE Activity

Since 1995, RSD has been actively recruiting high school age students - grades 8 through 11- from Asia. There is a considerable Chinese, Taiwanese and Korean population in Richmond; and it was largely through family contacts that the first students were recruited. Each year, increasing numbers of Asian students seek out RSD for a number of reasons.

Students who successfully complete graduation requirements from the Richmond school system receive the same credentials as Canadian students, which will qualify them to apply to continue to study at the post-secondary level in Canada or the United States. The RSD appeals to

²⁵ Complete information is available at www.rsd38.bc.ca

international students by offering high academic standards, university and college entrance programs, government approved courses and exams, the opportunity to study in an English language setting and to learn alongside Canadian students, and language development and academic preparation courses.

The International Student program includes two full-time staff members for promoting and managing the program. Students are placed in RSD schools which then receive additional administrative funds to offset the special costs associated with foreign students.

4.2.2. ROI Analysis

4.2.2.1. Perspective

While the ROI could be studied from the perspective of students, the community of Richmond and/or the BC economy, the perspective for purposes of this study is the financial experience of Richmond School District. Specifically, we examine what RSD has invested and what the returns for that investment are relative to the recruitment of and service to foreign students. Administrative personnel note that this IE activity is not completely discrete from other school district IE activities, such as student and staff exchanges, ESL training, and sale of curriculum.

4.2.2.2. Unit of Analysis

Options for the unit of analysis, in this case study, might be per student or per school, or over the duration of the program. For this case study, we use per school year because that is the organizing structure behind the way in which the school district accounts for and manages students and finances.

4.2.2.3. Costs

Costs typically fall into two categories: tangible and intangible. Both are important to and acknowledged by public education institutions; however, ROI analysis focuses on the tangible costs and all costs must be included to do an acceptable ROI analysis. In this case study the following tangible costs have been tabulated by Richmond School District head office.

EXPENDITURE ITEM	2001/2002 COST
IE Coordinator salary and benefits	\$103,955
Admin assistant salary and benefits	\$42,198
Staff memberships, PD, travel costs	\$11,000
Teaching assignment (105 students / 17.297; 6.2 teaching staff)	\$421,076
Administrative time blocks (1/15 students per school added)	\$108,602
School Cash Allotment (\$405/ Sept. student plus \$202.50/ Feb. student)	\$63,788
Medical Services Plan Premium (@ \$700 /Sept. student plus \$350/ Feb. student)	\$110,250
Marketing (marketing trips, materials and communications)	\$157,836
Office expenses (telephone, supplies)	<u>\$5,200</u>
TOTAL	\$1,023,903

4.2.2.4. Returns

Like costs, returns are both tangible and intangible. Clearly, in the context of international student recruitment, tangible benefits are paramount, i.e., the work is done for financial gain. The return to RSD in this case study is \$1,896,650 paid by the clients/students in application and tuition fees.

		Students	Application fees	Program fees	Total
Enrollment	September	148	\$29,600	\$1,687,200	\$1,716,800
	February	19	\$3,800	\$109,250	\$113,050
	Non-refundable deposits	334	<u>\$66,800</u>		<u>\$66,800</u>
			\$100,200		\$1,896,650

In addition, intangible returns include the residual benefits to other IE endeavors. Some of the intangible returns include increased international knowledge and skill development for students and teachers in Richmond School District classrooms, and relationship building for future business and sales development.

4.2.3. ROI for International Student Recruitment IE Sample

ROI analysis is an accounting-based method of comparing the costs of training to the benefits. It requires that tangible costs and benefits be converted to dollar values. In the case of

international student recruitment, ROI addresses the question: “For every dollar invested in international student recruitment, how many dollars does the school district get back?” ROI is expressed as a percentage generated through this formula: International Student Recruitment Benefits / International Student Program Costs X 100 = ROI.

On this basis, the Return on Investment in international student recruitment, to RSD, is 185% per year ($\$1,896,650 / \$1,023,903 \times 100$). For each dollar spent on the recruitment and serving of foreign students, RSD accrues a return of \$1.85 in purely financial gain.

4.2.4. Case Study Issues

From this case study, two issues emerge. The first issue is various ways to increase ROI that RSD has employed. One is the intangible value of a “good reputation” - the value of being a safe place for students, a venue with all amenities and proximity to the Asia Pacific, a place where relatives already live. The second issue is the increased ROI inherent in the RSD policy of recruiting only students with a high probability of academic and social success. RSD does not have to spend additional funds on programs for special needs or problem students.

The second issue, then, is the value of taking a very pragmatic, business approach to IE if financial gain is the goal. It is important to note that the funds generated are used to enhance programs for all RSD students.

4.3. Student Mobility Case Study

4.3.1. The International Education Provider

Simon Fraser University (SFU), located in Burnaby, BC, is a full-service public post-secondary university serving students from BC, Canada and abroad.²⁶ It has an established reputation of excellence in international education endeavors and opportunities for students. Within the overall context of International Education, SFU students are offered exchange programs with universities around the world and summer field schools in exotic locations; eight-month full-time interpreter training programs; and various language and culture programs. Other forms of International Education include international student recruitment, specialized English language training, international cooperation and research projects, and faculty exchanges.

²⁶ Complete information is available at www.sfu.ca

4.3.1.1. The Type of International Education

“Student mobility” is a common form of International Education, exemplified by “field schools” at foreign institutions. Student mobility for Canadian students involves spending time at the foreign institution and the experience often incorporates an element of distance education. The delivery of field school experience is not typically undertaken for revenue generation but to enhance student learning and promote international competencies.

In this case study, we examine a particular International Education student mobility endeavor delivered by a Canadian public post-secondary institution to Canadian clients/students. Specifically, we study the China portion of the Field School program of Simon Fraser University, the longest-running Field School, and compare it with other more recently established SFU Field Schools. While some IE endeavors must operate on a cost-recovery basis, the Field School program does not.

4.3.1.2. Details of the IE Activity

A Field School, according to SFU, is an extended field trip or a group study tour. An SFU professor travels with a group of 12-20 university students to a specific country or region for a period of 8 -13 weeks to complete course work and field studies. Students pay a fixed fee that includes travel from Vancouver, tuition, shared accommodation, health insurance and field trips. In 2002, prices ranged from \$4500 to \$5500. Students earn course credits through a Field School. Students are only eligible to participate in a Field School after completing 30-45 credit hours at SFU; and non-SFU students can participate as Visiting Students. In Summer 2002, SFU students were offered Field Schools in Vietnam and Thailand, China, Fiji, Czech Republic, Greece and France.

While Field Schools are offered in various locations, the costs and benefits may differ between and among the locations. For example, start-up costs apply to new locations; maintenance costs may vary by socio-political stability in the country.

SFU has offered a Field School in China for 18 years and, for purposes of this study, we will examine the average annual ROI for this long-term IE endeavor. Over that time, 252 students have participated and have paid an average fee of \$876 per Field School. After we establish the ROI for that Field School, we compare it to other Field Schools using the same methodology.

4.3.2. ROI Analysis

4.3.2.1. Perspective

While the ROI could be studied from the perspective of students, those who hire them, and/or the Canadian economy in the long term, the perspective for purposes of this study is the International Program at SFU. Specifically, we examine, on an annual average basis, what students pay, i.e., income to SFU, compared to SFU costs and benefits from the China Field School program and Field Schools in general.

Administrative personnel note that this IE activity is not discrete from other Field Schools, and is not completely discrete from other SFU activities, such as student and staff exchanges, language and cultural training, and research projects.

4.3.2.2. Unit of Analysis

Options for the unit of analysis, in this case study, might be per student or per field school year. For this case study, we use, first, per Field School component, i.e., the China field school on an annual basis based on an 18-year average and, second, the entire Field School program on the basis of an annual average. One Field School serves as a representative sample of longstanding Field Schools. The combined Field School average serves as a long term ROI and an average annual ROI.

4.3.2.3. Costs

Costs typically fall into two categories: tangible and intangible. In this case study the following tangible costs for the China Field School have been tabulated by SFU.

COSTS TO INSTITUTION		TOTAL
Faculty salary	18 @ \$33,000	\$ 594,000
Feasibility trips	6 @ \$3,000	\$ 18,000
Posters and promotion		\$ 5,000
Administration		
Co-op terms, pro-rated		\$ 4,500
Co-coordinator's salary, pro-rated		\$ 5,000
Director's salary, pro-rated		\$ 30,000
Communications		\$ 2,000
Orientations, etc		<u>\$ 4,000</u>
	TOTAL	\$ 662,500

4.3.2.4. Returns

Like costs, returns are both tangible and intangible. The China Field Schools have operated for approximately 18 years, and there are accruing intangible benefits from a long-term relationship. According to SFU tabulations, the financial returns to the institution are as follows:

FINANCIAL RETURNS TO INSTITUTION

Tuition income	252 @ \$876	\$ 215,712
Administrative levy income		\$ 25,200
Weighted FTE grant from provincial government	252 @ \$3000	<u>\$ 735,000</u>
	TOTAL	\$ 975,912

In addition, intangible returns include the learning acquired by 252 students and 18 visiting faculty, the goodwill established between institutions and countries, the opportunity for more faculty and student exchanges, and new research linkages.

4.3.3. ROI for Student Mobility IE Sample

ROI analysis is an accounting-based method of comparing the costs of training to the benefits. It requires that tangible costs and benefits be converted to dollar values. In the case of student mobility, ROI addresses the question: "For every dollar invested in the student mobility programs, how many dollars does the training institution get back?" ROI is expressed as a percentage generated through this formula: $\text{Field School Benefits} / \text{Field School Costs} \times 100 = \text{ROI}$.

On this basis, the Return on Investment in the China Field School, to SFU is a total of 147% ($\$975,912 / \$662,500 \times 100$). For each dollar spent on the China Field School, SFU accrues a return of \$1.47 in financial gain.

4.3.4. Comparing Field Schools

Using the same methodology, the ROI has been estimated for other field schools.

Field School	Costs	Financial returns	Total and Annual Average ROI	Duration
China	\$662,500	\$975,912	147%	18 years
Prague	\$307,500	\$636,864	207%	8 years
Fiji	\$264,500	\$589,770	223%	7 years
South East Asia	\$229,500	\$483,120	211%	6 years
France	\$154,500	\$264,396	171%	4 years
Greece	\$160,500	\$240,360	150%	4 years
Average	\$296,500	\$531,737	180%	

On this basis, the Return on Investment in the SFU Field Schools, to SFU is a total of 180% ($\$531,737 / \$296,500 \times 100$). For each dollar spent on the Field School program, SFU has accrued an average annual and total return of \$1.80 in financial gain.

4.3.5. Case Study Issues

From this case study, two issues emerge. First is the nature of long-term, short-term and/or new IE endeavors with very different costs. In this case study, we have chosen to average costs and returns to give a long-term ROI analysis. It would be interesting to contrast that with the most current annual ROI. It is clear some Field Schools may have greater ROI than others, and “why?” is the logical question to ask.

The second issue is the very nature of tabulating “returns” of registering students in any program but in IE in particular. What is the ROI of an individual student? And is the ROI to the institution greater from students in the IE program or in regular, on-site programs? Future studies might address this comparison, or an ROI comparison of field schools as input into administrative decision-making.

5. Outcomes and Analysis

On the basis of the three case studies, the following observations have been made regarding categories for returns and investments, actual and comparative ROI by IE type, lessons learned, quality assessment of the ROI analysis, and recommended future research.

5.1. Comparing Return and Investment Categories for IE

It is worth repeating that costs and benefits may be tangible and/or intangible, and that ROI analysis focuses on the direct and indirect financial costs and benefits in the full knowledge that there may be equally important intangible, non-financial benefits to the endeavor.

5.1.1. IE Investment Costs

At the outset of the project, the advisory committee generated the following list of potential cost categories for IE activities:

- administration (management and clerical)
- marketing (materials and travel)
- delivery (instruction salaries and benefits; facilities)
- communications
- specialized curriculum
- student services (office and staff for orientation and debriefing, counseling, financial assistance)
- extra program costs as required
- faculty supervision of program
- partnership development and maintenance, and
- evaluation.

Through the data gathering phase, we learned that:

- these categories cover all the potential costs, i.e., nothing was added to the list but not all categories applied to the three IE case studies; and
- while labeled in various manners, specific costs could be slotted into this set of categories.

Therefore, for ROI analysis purposes, it may be concluded that the categories “work” in the IE framework.

As stated earlier, it is absolutely imperative that all programs costs be included in the ROI analysis. This study benefited from two case studies that had created the IE program - international student recruitment and contract training - as a discrete activity and had clearly monitored costs from the outset of the activity; i.e., they were able to readily produce an accounting of costs and financial returns. The third case study required that IE costs be broken out from larger program costs, i.e., there was an element of professional estimation in pro-rating administrative and other costs. In all three case studies, there were possible and probable intangible community and social costs, and additional personal costs for participants.

5.1.2. Investment Returns

The nature of returns is largely dictated by the mandate of the IE endeavor, i.e., whether it is intended primarily to generate income (Type 1) or to increase student learning and global understanding (Type 2). That is not to say that the ROI will be greater in one type or the other, but it would seem likely, at first glance, that Type 2 IE would experience lesser ROI and in fact, would not be very concerned about demonstrating ROI. In addition, it is interesting to speculate if Type 1 or Type 2 would demonstrate more or different intangible returns, such as personal skill acquisition and generalized inter-cultural experience for learners and professional educators, individually and/or collectively.

At the outset of the project, the advisory committee generated the following list of potential financial return categories for IE activities:

- financial gain (e.g., fees paid)
- professional development for staff (i.e., in lieu of direct PD expenses), and
- curriculum development (i.e., for future use/sale).

Through the data gathering, we learned that this list was inadequate. The second measurement, i.e., professional development for staff, was not measurable within the context of existing data. In addition, each case study activity tabulated different returns. All three included the “basic” of a fee paid, either by the student directly or by an agency on behalf of the students. In Type 1 IE activities, the primary income is from fees alone, however, there may be additional sources of income, e.g., non-refundable application fees. In Type 2 activities, since students do not bear the real cost of the experience, the program costs are subsidized through, e.g., government funds to the institution and students themselves. It is concluded, therefore, that a larger list of IE returns needs to be explored but that institutions may not experience all of those returns.

5.2. Comparing IE by ROI Analysis

Using only the three case studies in this project, it is unwise to draw ROI conclusions or comparisons, but the data makes interesting suggestions or hypotheses to study.

- Contact training: 138%
- International student recruitment: 185%
- Post-secondary field school: 180%

5.3. Observations

Based on the case studies and professional education experience, FuturEd makes the following observations for discussion purposes:

- Whereas student mobility programs at public post-secondary institutions do not concern themselves primarily with income generation, it is conceivable that they demonstrate more than adequate ROI.
- While one would assume that Type 1 IE, (e.g., contract training undertaken for financial gain), would result in substantial financial gain, this is not necessarily the case.
- While one would assume that returns from Type 1 activities would be largely financial - because that was their purpose - they are likely to accrue a significant number of intangible returns.
- One method of off-setting real costs is to charge a non-refundable application fee. The experience of the one case study that did so was that considerably more students applied than were (or could be) accepted. One might surmise that encouraging a large number of applications, through effective marketing, is a potential means of financial gain if the returns offset the cost of that marketing.
- In sharing IE experiences, it is possible for institutions to increase their ROI by adding means of generating income learned from the experiences of others.
- In Type 2 activities, the “return” of “weighted FTE²⁷ grants” has been introduced. Related assumptions might be that:
 - The province is paying for “seats” on the basis of Full Time Equivalents for all students
 - Students participating in IE activities are taking a seat, regardless of where it is.
 - Since that FTE allotment is to pay for capital costs - classroom space, utilities, and since the IE program does not accrue those costs, it is “profit” to the institution.

²⁷ Full Time Equivalents - the standard basis of transferring funds from the province to institutions

5.4. Lessons Learned

Recognizing that this is preliminary research, the following “lessons” have become apparent to the project participants:

1. ROI analysis is not particularly difficult. Determining costs is straight forward; determining returns, in some cases, takes a bit more reflection and analysis, but it can be done. While ROI analysis is “new” to education administrators, it is well-received in the context of demonstrating accountability.
2. It is possible to generate lists or tools by which all IE projects can study and determine ROI.
3. It may be hypothesized that the same lists or cost/benefit categories apply to other education/training programs or endeavors, and that comparisons between programs or types of education investments can be made.

5.5. Quality Analysis: Project Evaluation

As stated earlier, there are at least eleven criteria for good ROI analysis. In the professional opinion of the researchers and the advisory committee, these case studies and ROI analysis meet the quality criteria, i.e.:

1. utility — It is practical and useful.
2. feasibility — It is doable. It takes a reasonable amount of time.
3. ethicality — It respects legal and ethical issues.
4. accuracy — It is honest and technically sound.
5. acceptability — It is agreed upon by all stakeholders.
6. efficiency — It is cost effective relative to the cost of the International Education.
7. adaptability — It can be used for different types of International Education.
8. inclusiveness — It addresses a range of measures and information sources, however, only for tangible costs and returns.
9. flexibility — It may be used before, during, and/or after the International Education endeavor.
10. effectiveness — It appears to meet a need for information.
11. credibility — It is believable.

5.6. Future Research

Building on this preliminary research, FuturEd suggests that future research be directed at one or more of the following possibilities:

1. Comparisons within types of IE, e.g., contract training (same categories, same ROI?).
2. In-depth study of the tangible costs and benefits of individual types of IE through a large sample.
3. In-depth study of all types of IE, e.g., with 3-5 case studies for each.
4. Comparisons of IE ROI between types of institutions (public vs. commercial).
5. Comparison of IE to other programs and services at institutions.
6. Adequacy of ROI, i.e., what amount of ROI is acceptable? Inadequate? Too much?
7. Making tangible some intangible costs and returns, e.g., professional development of staff.

6. ROI Analysis for IE: Tools and Advice

Based on this project, the following model appears to be workable in determining ROI for IE. It is relatively simple and unsophisticated; however, it appears to be adaptable to many forms of IE.

6.1. Reasons for Conducting ROI Analysis

As with any other expenditure of human and financial resources, there should be a clear purpose or purposes for conducting ROI analysis. For example, determining the Return on Investment in Learning can be used to:

- demonstrate that education/ training can be an investment rather than an expenditure;
- make informed choices between learning/teaching options;
- encourage students and educators to take training returns and costs more seriously;
- compare learning/teaching types, e.g., e-learning and onsite learning;
- compare the cost of education/training to other investment options;
- contain and/or maximize education/training budgets;
- make course objectives and content more relevant;
- refine and revise, or eliminate, weak programs;
- improve the financial worth of human capital assets;
- market the value of particular learning products and services;
- promote the importance of evaluation and quality assurance;
- project future learning costs;
- improve the efficiency of resource utilization;
- hold students accountable for the skills and knowledge acquired from training/education;
- document positive change in individual or organizational performance;
- encourage transfer of training/education;
- measure the effectiveness of education/training; and/or
- demonstrate accountability for education/training expenditures and policies.

The focus for ROI analysis is purpose: **Who wants to know what?** It shapes perspective, unit of analysis, data gathered and reporting mechanisms.

6.2. Planning for ROI Analysis

ROI analysis is made easier by taking these initial planning steps:

- Step one: Clearly identify the program or service that is to be studied.
- Step two: Determine which stakeholder perspective you will focus on, i.e., learner, institution, community/province, society at large.
- Step three: Determine a unit for analysis, e.g., per student, per year, per offering.
- Step four: Determine **all** the costs for the course or program, separate into tangible and intangible. Use the intangibles as “additional considerations.”
- Step five: Determine what returns are probable, and those which can be measured in financial terms. Separate returns into tangible and intangible.
- Step six: Determine the data to be gathered and the means of doing so, e.g., focus group, interviews.
- Step seven: Isolate, where possible, the returns or effects.
- Step eight: Convert costs and returns to monetary values.

6.3. Gathering the Data

6.3.1. Determining Costs

Tangible Cost Items	Method of Calculation	Total
Administration (management and clerical)		
Marketing (materials and travel)		
Delivery (instruction salaries and benefits; facilities)		
Communications (telephone, internet, mail)		
Specialized curriculum (purchase or development)		
Student services (office and staff for orientation and debriefing, counseling, financial assistance)		
Faculty to teach or supervision of program		
Partnership development and maintenance (e.g., feasibility studies and trips)		
Extra program costs as required		
Evaluation		
Total Cost		

6.3.2. Determining Returns

Not all of the potential returns will apply to all IE situations. Utilize only those which are relevant; however, the more returns measured, the greater the ROI will be.

Potential Tangible Returns	Method of Calculation	Total
Fees paid by students or clients		
Non-refundable application fees		
Additional student fees, e.g., prior learning assessment, counseling, health insurance		
Student subsidies in form of government FTE allotment		
Products for resale, e.g., specialized curriculum		
Philanthropic donations, e.g., scholarships, art		
Other		
Other		
Total Returns		

6.4. Determine ROI

ROI is expressed as a percentage. Determine the ROI analysis using this formula:

$$\text{Returns} / \text{Costs} \times 100 = \text{ROI}.$$

Some follow-up questions might be:

- Is this good enough? Excellent? Unacceptable?
- How does it compare to similar programs at other institutions? At our institution?
- How does it compare to very different programs and services at our institution?
- What intangible costs and returns could be factored into the analysis?

7. Making Intangibles Tangible

This project clearly focused on tangible costs and returns to International Education. However, case study participants identified an array of intangible returns and the Advisory Committee expressed an interest in exploring four specific categories of potential returns.

7.1. Intangibles from the Case Studies

Case study participants briefly list the following intangible returns to their institutions, to clients, and/or to the broader community.

Case Study # 1 British Columbia Institute of Technology (BCIT)

- faculty development opportunities
- international development opportunities
- Spanish curriculum
- expansion to Latin American market (Brazil, Argentina, Mexico, Peru)
- long-term partnership with the client institution
- potential revenue source over several years
- successful business relationship with a large multinational business
- increased opportunity for intercultural learning within the community
- technology transfer to institution

Case Study # 2 Richmond School District (RSD)

- enhanced reputation of RSD as
 - safe place for students to live
 - venue with many amenities
 - proximity to Asia Pacific
 - place where relatives already live
- increased opportunity for intercultural learning within the institution and the community
- facilitation of international student influx over several years
- residual benefits to other IE endeavors in the institution
- cross-cultural educational opportunities for Canadian students
- continuing potential revenue source
- international development opportunities

Case Study #3 Simon Fraser University (SFU)

- long-term partnership with client
- faculty development opportunities
- expansion to Asian market
- potential revenue source over time
- cross-cultural learning and travel opportunities for SFU students
- increased intercultural learning opportunities within the community
- enhanced reputation of SFU as leader in intercultural learning and Asian field school expertise
- international development opportunities

It is conceivable that some may be described in measurable terms in future studies. From these lists, four were identified for further exploration, i.e., the contribution of International Education to:

1. developing human capital, individually and/or regionally;
2. professional development of staff;
3. strengthening the institutional reputation; and
4. ensuring long-term stability in the education/training system.

The following is a brief discussion of each.

7.2. Contributing to Long-term System Stability

It is hypothesized that international students contribute to long-term system stability in Canada's education and training system on the following basis:

- Demographic data indicates a decline in K-12 enrolment Canada-wide.
- This decline is a temporary problem because there are likely to be more school-age children in the future, probably through immigration.
- Facilities and learning systems need to be maintained because recreating them in the future would be costly.
- Therefore, international student provide "infill" in domestic enrolment fluctuations.

In order to measure this return, it would be necessary to examine demographic statistics and trends, tabulate the cost of closing facilities and staff severances, and draw the financial relationships on a school district or province-wide basis.

7.3. Strengthening the Institutional Reputation

It is hypothesized that successful IE programs and projects contribute positively to an institution's reputation, and probably the converse is true. In order to measure the contribution, it would be necessary to gather student opinion data and relate it to an increase in overall enrolment. In fact, SFU is proud of an established leadership role in International Education and is informally aware that some or many students choose SFU for that reason. It would be interesting to know the basis of the entire student body's reasons for choosing an institution so that a portion of the entire enrolment could be apportioned to various initiatives and programs. This would contribute to a much broader ROI comparison of programs and other institutional priorities for expenditures. Richmond School District, too, is aware that it has a very positive reputation in parts of Asia and feels that the success of its IE program is partially due to and partially responsible for maintaining and enhancing that reputation. Measuring the economic value requires some creative accounting.

7.4. Professional and Human Capital Development

In human resources development, especially in the context of the globalized knowledge economy, the recent literature speaks of the contribution of education to human capital development for society at large. Additionally, there is a growing body of literature about "knowledge workers" and how measuring their productivity is different from traditional production workers. In the new jargon, knowledge workers are "human capital assets" and education/training is a "human capital investment." More precisely, human capital, or intellectual capital, is defined as the knowledge and skills resident in individual humans and used to produce goods, services or ideas in market and non-market circumstances.²⁸

Human capital grows in two ways: when the organization uses more of what people know and when more people know more that is useful to the organization. Therefore, investing in training/education is investing in human capital assets. Human capital investment is a growing concern of the Organization for Economic Cooperation and Development (OECD).²⁹

- An OECD analysis estimated that secondary education had contributed an annual 0.6% to productivity growth in OECD countries between 1960 and 1985; however the evidence of additional economic output attributable to education/training has to be set against the cost of the investment.

²⁸ *Measuring What People Know: Human Capital Accounting for the Knowledge Economy* (Miller, 1997) -- an OECD publication.

²⁹ *Counting Human Capital* (Healy, 1998) in the OECD Observer at <http://www.oecd.org/>

- The World Bank has used cost-benefit analysis to calculate a "social" rate of return to university education of well over 10% a year between 1960 and 1995 in the OECD countries.

They conclude that investment in human capital yields large payoffs but rates of return of investment in human capital are generally measured in a very restrictive way, by comparing the additional earnings from employment of better-educated individuals to the additional social cost of investing in more education/training. Discovering what types of investment in human capital give the biggest returns is also a pressing concern. The OECD states that "priority now has to be given to the development of more direct measures of different types of skills and the role of learning in the workplace, as well as the measurement of the social and economic impact of human capital investment in sustaining development and reducing inequality."³⁰ Understanding the costs and benefits of training knowledge workers will be an unavoidable challenge as more knowledge-intensive industries develop and as traditional industries decline.

From this theoretical discussion, it follows that International Education contributes to human capital development, in BC and in Canada, in at least three ways.

1. Participation in an IE activity or program is an opportunity for staff to acquire new skills and knowledge; it is an informal professional development activity. To be considered a formal PD activity, it would have to be an entitlement within the collective agreement and institutional policy. Both formally and informally, IE and professional development contribute to human capital development for staff in the system, to the human capital of the education/training system, and society at large.
2. The education system exists, in some respects, to develop the human capital of a society; and international education is a component that provides for the learning of unique and important international competencies. Students, individually and collectively, acquire skills and knowledge through IE that are important for global citizenship and work in the global economy. Canada's human capital assets are increased.
3. Many international students, at all levels, choose to remain in Canada. Bringing skills and abilities, they also contribute to Canada's human capital.

Hence, there are three ways of measuring this "return" from IE.

³⁰ *Counting Human Capital* (Healy, 1998) in the OECD Observer at <http://www.oecd.org/>

For individuals, ROI in learning can be closely related to measuring Intellectual Assets Development.³¹ The following are two techniques used to value intangible assets which result from learning:

- Benchmarking:³² involves identifying programs/institutions that are recognized leaders in leveraging intellectual assets, determining how well they score on relevant criteria, and then comparing an institution's performance against that of the leaders.
- Basic worth: centers on three questions. What would happen if the information/training now in use disappeared altogether? What would happen if the amount of key information/training available was doubled? How does the value of this information/training change after a day, a week, a year? Evaluation focuses on the cost of missing or underutilizing an opportunity, avoiding or minimizing a threat.

For the individual, institution and society, ROI in learning is also related to an impact comparison of alternative investments.³³ This model is undertaken in two phases: a behavioral audit, and calculations of ROI. The results of the behavioral audit demonstrate the extent to which the learner is using the skills presented in the education/training program. If s/he is not using the skills, it would be difficult to demonstrate a return on investment from the program. The concluding question asks: Is this a good return on education/training investment? To determine whether it is a good investment alternative, the returns generated may be compared to individual or societal return on assets. If the return on education is greater than the return on other assets, it can be concluded that education/training has been a good investment. If the return is equal to or less than the return on other assets, there are likely better investment alternatives. For example, the OECD has concluded that the rate of return on societal investment in education/training - human capital investment - is as favorable as that on physical capital investment.³⁴ In short, the relationship between IE and BC's human capital assets could become the focus of in-depth study using the tools set out above. Much more research is needed to be clear about the many benefits that accrue to individuals, institutions and society through International Education.

³¹ *Measuring Intellectual Assets* (Montague Institute, 1998) at <http://www.montague.com/le/le1096.html>

³² More specific advice on benchmarking (*Ten Steps of Benchmarking*) is available at http://www.strategis.ic.gc.ca/sc_mangb/strategy/engdoc/tsob.html

³³ *How to Measure Sales Training Return on Investment* (Goldner, 1997) at <http://salesdoctor.com/longterm/6train5.htm>

³⁴ *Human Capital Investment* (OECD, 1998) in OECD New Issues at <http://www.oecd.org/>

8. Acknowledgements

8.1. Advisory Committee

This project benefited from the International Education experience and expertise of:

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